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ABSTRACT

Educational needs in the remote rural areas of America are profound. The sparsity of population causes transportation problems and hinders reorganization. As a result, the present system permits, and in some states, encourages independent school districts to continue operating when their programs are inferior even when compared to minimum standards of the North Central Accrediting Agency. This report presents the background and plans for developing a rural area model school for grades 9 through 12. A planning grant for the model school was funded under Title III, Elementary and Secondary Education Act, in January 1966. The educational specifications for the model school are presented as a separate chapter of the report. (TL)

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Salem Model School

Salem, Arkansas

A Program of Individualized Instruction

IN A BUILDING

Accenting

Accessibility

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Flexibility

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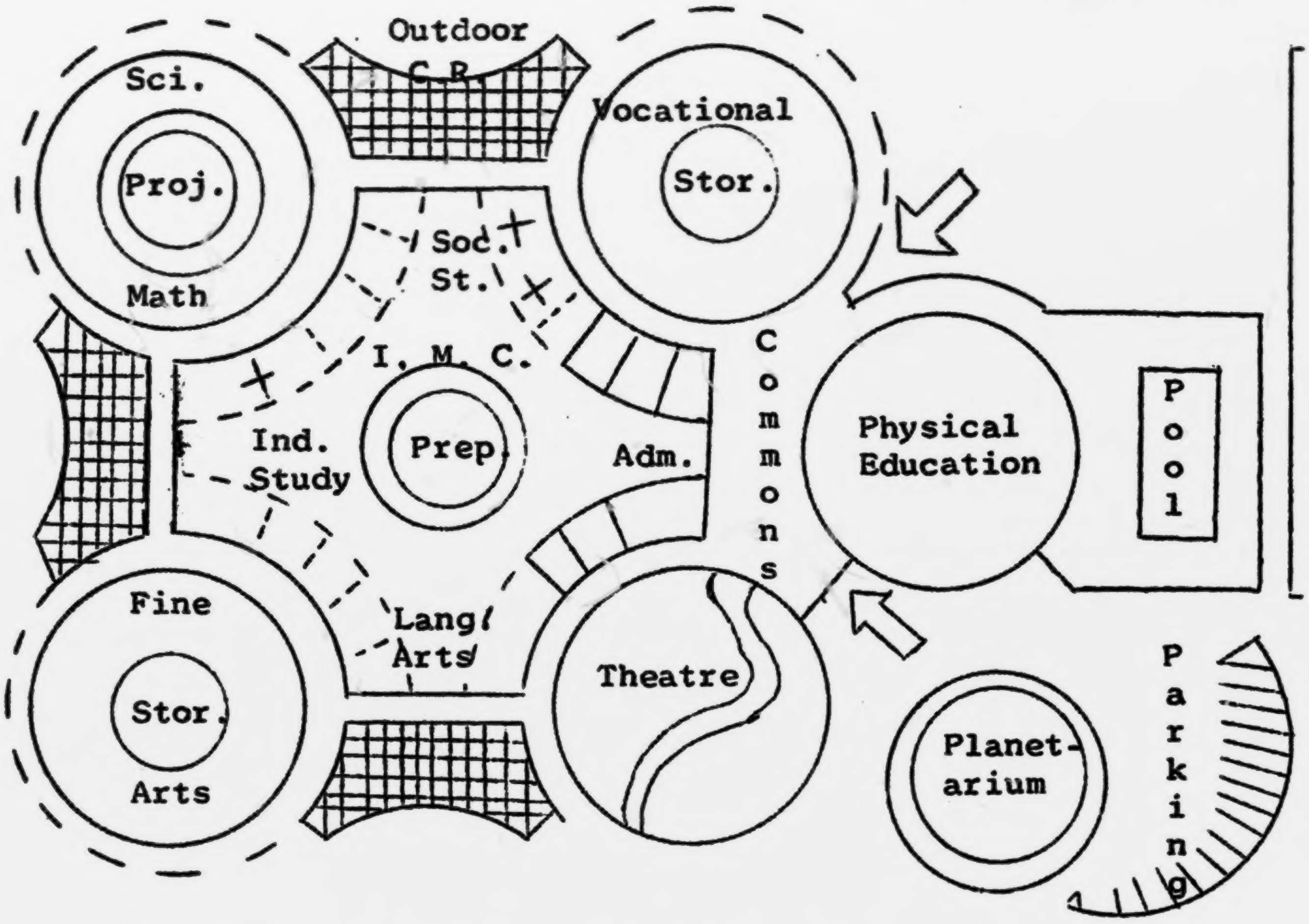
SALEM MODEL SCHOOL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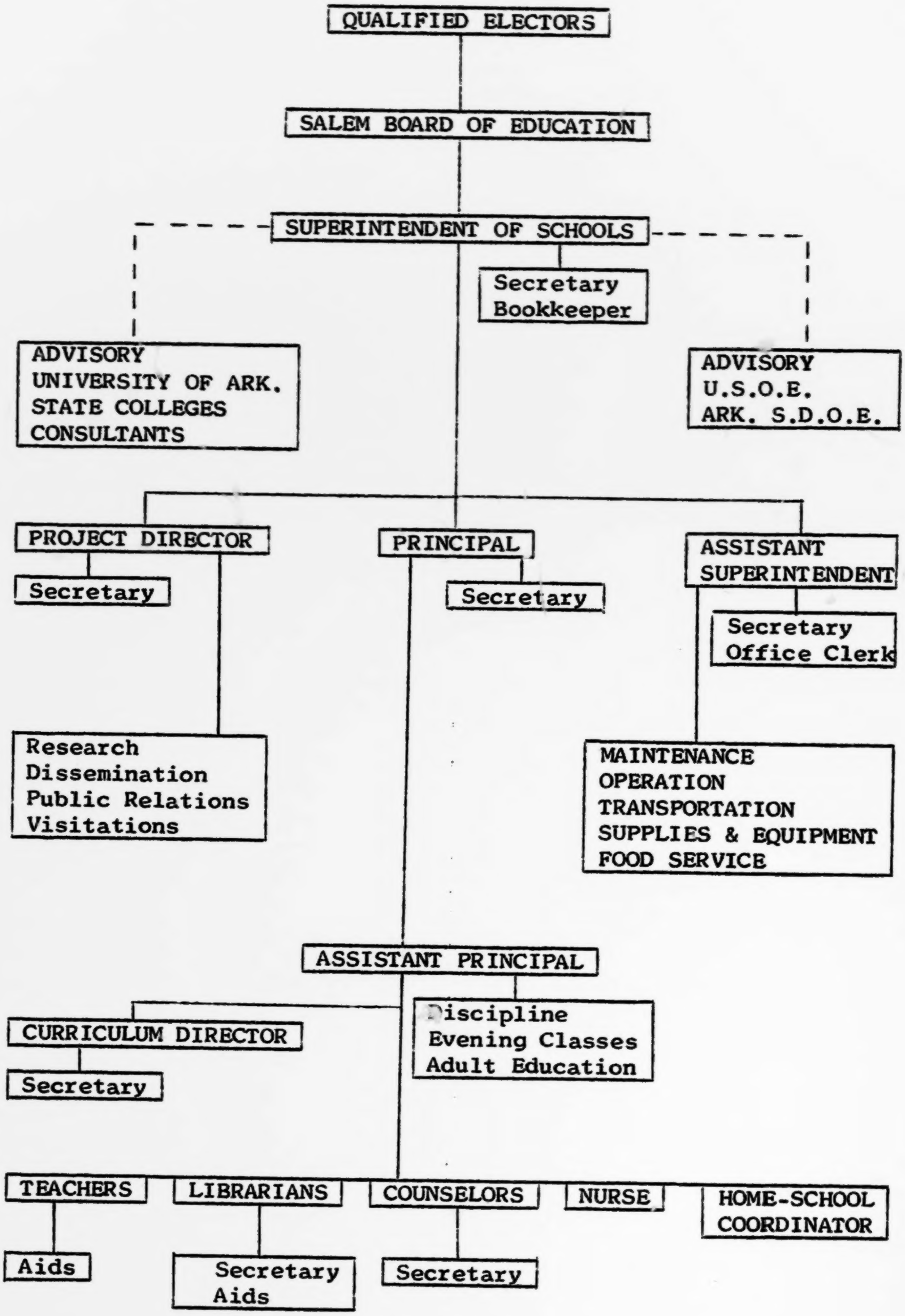
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ACKNOWLEDGEMENT

The completion of a study of this kind depends upon the assistance and cooperation of a vast team of educators. The investigator wishes to thank the Salem School officials for their cooperation and for the freedom to innovate which they permitted. He is also especially grateful for the valuable suggestions and criticisms he received from teachers, principals, and consultants who participated in the study.

The writer is deeply appreciative of the guidance and sincere encouragement he received from the faculty, his fellow students, and a devoted family during the course of this study.

J.L.V.

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A COMPREHENSIVE PLAN FOR A MODEL HIGH SCHOOL IN FULTON COUNTY, ARKANSAS

CHAPTER I

INTRODUCTION

Fulton County, Arkansas, is located in the extreme northern part of central Arkansas in the ozark foothills. In 1960 the population was reported at 6,657 and was classified by the bureau of census as all rural. No special census has been taken; however, the records of the electric utility company operating in Fulton County indicate a gradually increasing population. The 1966 County population is estimated to be 7,221 persons.[1]

The county has three independent school districts and a small, isolated, nonoperating area in the northwestern part of the county composing the County District. The three independent districts of Mammoth Spring, Viola, and Salem each have one school center at which grades 1 through 12 are taught. Students living in the County District are transported to Bakersfield, Missouri, where their tuition is paid by the Fulton County District.

According to the 1966 Report on House Concurrent Resolution No. 58 of 1961 General Assembly, the Mammoth Spring District had an enumeration of 426 students; Salem had an enumeration of 673 students; Viola's enumeration was 376; and the enumeration of the County District was 12 students. The total enumeration of all districts in Fulton County was 1,487 students. Arkansas law provides for a bi-annual enumeration of all persons living in a district who are between 6 and 18 years of age.

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[1] See Appendix A for explanation of how estimate was made.

According to the State Department of Education, the Mammoth Spring High School has a B rating, and the Salem and Viola High Schools have an A rating. The programs offered in all schools were considered inadequate to meet the needs of students who must prepare to compete in the education conscious society of today. None of the schools offered more than 31 units of credit. Furthermore, there was an overall pupil-teacher ratio of 28 to 1; however, the enrollment was such that some classes had a pupil-teacher ratio in excess of 40 to 1, while others were as low as 7 to 1. No school in the area had a music, art, drama, or speech department. The newest high school plant was built in the early 1930's and was inadequate even when compared to minimal standards. None of the schools was financially able to support a program which would meet minimum requirements of the North Central Association.

There was a 1964 assessed valuation of $2,922 per student enumerated in Fulton County. The average millage was 32.5 mills, which yields less than $100 per student in local revenue.

The Salem School Board applied for, and received, a planning grant from the Department of Health, Education, and Welfare under the Elementary and Secondary Education Act, Public Law 89-10, Title III. The grant was funded January 28, 1966, and was used to plan a model school for a rural area. The school will be located near Salem, Arkansas, which is in the geographic center of Fulton County.

The plan proposes a modern approach to education through the development of a curriculum specifically adapted to meet the needs of rural children and by suggesting new plans and procedures for augmenting instructional practices. This exemplary program provides for an adult educational system that will attempt to raise the educational level from its present 8.4 grade position. Particular emphasis has been centered on plans to cultivate appreciation for culture and the fine arts in this and other remote rural areas of America.

The completed plans have been submitted to the Department of Health, Education and Welfare for a building and operational grant as provided for under Title III.

Statement of the Problem

The problem was to study the present status of school conditions in north central Arkansas and southern Missouri and to plan an exemplary program to meet the needs of all school students in grades 9 through 12 and to plan, within the same framework, an exemplary adult education program to elevate the adult education level (8.4). An attempt was made to incorporate a program that would cultivate appreciation for culture and the fine arts in this and other remote rural locales of America.

Definition of Terms

Planning Grant refers to the federal grant approved for the Salem School District in January, 1966, in the amount of $19,418.

Supplement To The Planning Grant refers to a supplemental grant approved for the Salem School District in June, 1966, in the amount of $25,131. This supplement was approved upon recommendation of the project director to extend the planning time until June 30, 1967, a total of 17 months.

Model School is understood to mean that this school will serve as a model for other rural areas with similar problems.

Salem School District is the district with authority to act on legal matters pertaining to the planning grant.

Enumeration applies to the number of students between the age of 6 and 18 years living in a school district. The count is made in the spring of even numbered years.

A.D.A. or average daily attendance, refers to the average number of students attending during a given month.

Project Director is the person employed by the Salem School District to plan the model school.

Superintendent indicates the executive officer of any independent school district in Arkansas.

Board Meeting is a legally held meeting for the purpose of conducting school business.

Exemplary refers to a school that has a unique program, organization or facility.

E.S.E.A. is the Elementary and Secondary Education Act.

Title III means the phase of Public Law 89-10 under which the Salem Model School planning grant was secured.

Area (or Areas) To Be Served consists of all of Fulton County, the western and northern part of Sharp County, the northern part of Izard County, which are all in Arkansas, and a small part of southern Missouri in Howell, Ozark, and Oregon Counties.

The Planning Grant

Educational needs in the remote rural areas of America are profound. The sparsity of population causes transportation problems and hinders reorganization. As a result, the present system permits, and in some states encourages, independent school districts to continue operating when their programs are inferior even when compared to miniumum standards of the North Central Accrediting Agency.

The Salem School District is located in the geographic center of a remote and deprived section of north central Arkansas and is now operating a public high school.

Under the leadership of A. R. Stroud, Superintendent of Schools, the Salem Board of Education applied for and received a federal grant to plan a supplementary educational center and services. The formulation of the Request for Planning Grant was done by A. R. Stroud, Superintdent of Schools, Salem, Arkansas. Roy B. Allen served as consultant in the development of the

Request for a Planning Grant.

Title of Project:	Planning Grant for Model School
The Applicant:	Salem School District No. 30
Address:	Salem, Arkansas
Approved Budget:	$19,418

A copy of the Request for Planning Grant Budget is given in Appendix B.

The formulation of the Request for a Supplement to the Planning Grant was done by John L. Vandiver, Project Director, Salem Model School, Salem, Arkansas, after consulting with members of the staff of the Arkansas State Department of Education, and Neal Shedd, U. S. Office of Education, all of which recommended more time for the planning stage.

Title of Project:	Request for Supplement to Planning Grant
The Applicant:	Salem School District No. 30
Address:	Salem, Arkansas
Approved Budget:	$25,131.97

TOTAL APPROVED BUDGET:	$44,549.97
END OF PLANNING GRANT:	June 30, 1967

A copy of the Request for Supplement to the Planning Grant Budget is given in Appendix C.

Value of the Study

First, the area will gain a modern high school and federal funds to implement the exemplary program in the new facility.

Secondly, this study has developed a complete set of educational plans and specifications which, when implemented, will more adequately meet the needs as they exist in rural areas. The Salem Model School facilities will be built according to the educational specifications.

Thirdly, educational leadership in other areas of America with similar problems can profit by observing the results of this model school.

Fourthly, one of the unique advantages of this project is that results can be evaluated under experimental conditions. This is usually very difficult to do because of restrictions that are results of existing programs and facilities and lack of unencumbered funds available for experimentation.

Finally, the program should strengthen the movement for voluntary reorganization in areas where reorganization is feasible.

Limitatinns of the Study

1. The school was planned for grades 9 through 12.
2. The area to be served is sparsely populated which restricted the size of the school to approximately 635 students.
3. Background information for this study has been somewhat limited by the completeness and accuracy of the following records:
    - a. The Arkansas State Department of Education
    - b. The Arkansas Industrial Development Commission
    - c. The Arkansas Department of Commerce
    - d. The United States Bureau of Census
    - e. The University of Arkansas Bureau of Business and Economic Research

CHAPTER II

HISTORICAL BACKGROUND OF THE AREA

Table I reveals that a total of 82 school districts were in existence in Fulton County, Arkansas, in 1919. It can be assumed that one of the first concerns of the early settlers of the area was to establish schools for their children. During the early days of education it was necessary for the district to be small enough in land area that children from any part of the district could walk the distance to and from school.

Early Consolidation

Patrons soon found that the size of the district in land area wasn't the only criterion for successful operation. Insufficient funds and lack of students forced 17 of these districts to cease operations during the first two years of the Great Depression. During the next 14 years, from 1932 to 1946, the school-age population decreased more than 1,000, and it became increasingly more difficult to finance any type of an educational program in many of the small districts, which had decreased in number to 28.

One piece of legislation which did much to eliminate the one-room schools of this area during the depression years was an act passed on March 16, 1927 which stated:

> The County Board of Education of any county shall have the discretionary power to dissolve any school district whose length of school term shall not be one-hundred twenty days in any school year, or whose average daily attendance does not exceed fifteen pupils, and attach the territory so dissolved to adjacent school district or districts....[1]

This act forced districts out of existence who could not finance the longer school term. It also meant the elimination of any district whose total enrollment fell below 15.

Two years later when the General Assembly of 1929 met, additional attention was given to the problems arising from small insolvent districts. Act 12 of 1929 provided a means by which one larger district could be formed by annexation of as many contiguous districts as were interested, even though the large district so formed might contain territory in more than one county. It is this same act that today makes it legally possible for two or more small high schools to combine forces and form one larger district.

The Arkansas Legislature passed Initiated Act No. 1, in the 1948 session. The provision herein abolished forever the one-room country school.

> On June 1, 1949, there is hereby created in each county a new school district which shall be composed of the territory of all school districts administered in the county which had less than 350 enumerated on March 1, 1949, as reflected by the 1948 school enumeration.[2]

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[1] Jim B. Higgins, Acts of Arkansas, Secretary of States Office, (Little Rock, Arkansas, 1927), p. 85.

[2] State Department of Education, The School Laws of Arkansas, (1962), p. 113.

The act did not provide for annexation of those high schools of the future whose decline in enumeration would render them too small to carry out a commendable high school program.

Population Trends

There is a positive correlation between the growth of schools in Salem, Mammoth Spring, and Viola and the decline in the number of common schools in the county and the number of students attending the common schools.

Table I reveals that the total school population continued to decrease until 1958 when it hit a plateau where it has definitely checked its downward trend. There are other indications that the population has started a gradual increase (See Appendix A).

TABLE I

TOTAL ENROLLMENTS AND THE NUMBER OF SCHOOL DISTRICTS IN FULTON COUNTY FROM 1919 TO 1960

YEAR	MAMMOTH SPRING	VIOLA	SALEM	COMMON SCHOOLS	ALL	TOTAL NO. DISTRICTS
1919	297	126	173	3049	3645	82
1922	281	146	234	3099	3760	79
1924	275	135	247	2884	3541	79
1926	216	112	180	2906	3414	79
1928	188	78	183	2669	3118	71
1930	201	204	322	2346	3073	71
1932	215	460	593	1831	3099	54

TABLE I - Continued

YEAR	MAMMOTH SPRING	VIOLA	SALEM	COMMON SCHOOLS	ALL	TOTAL NO. DISTRICTS
1934	230	471	506	1964	3171	57
1936	232	435	593	1942	3202	58
1938	254	459	613	1610	2936	57
1940	297	538	628	1458	2921	48
1942	285	595	565	1206	2651	43
1944	268	533	621	831	2257	38
1946	372	531	703	554	2160	28
1948	689	571	843	19	2122	4
1950	519	693	868	24	2104	4
1952	491	618	733	22	1864	4
1954	479	546	682	25	1728	4
1956	485	515	682	21	1703	4
1958	447	484	639	20	1590	4
1960	482	449	644	20	1598	4
1962	458	411	675	14	1558	4
1964	426	370	686	14	1496	4
1966	442	363	688	17	1493	4

SOURCE: *Annual Reports of County School Supervisor*, 1919-1966, Fulton County, Salem, Arkansas, pp. 3-15.

Economic and Social Background

According to the *U.S. Census of Population*, Fulton County had a 1960 population of 6,657. This represents a loss of about 28 percent from 1950. The greater portion of this decrease was in the rural farm sections. Area rural farm population dropped over 67 percent from 1930 to 1960. Area population was estimated at 6,498 in July 1961, a net loss of 159 from April 1960. The decline is believed to have halted by 1964, and indications are available now which point to a slight increase in population over the 1960 figure.

Population of the three largest towns in the county in 1960 was as follows:

Salem (County Seat)	713
Mammoth Spring	825
Viola	196

The population of the Salem Area totaled 1,819 in 1850. In-migration and natural birth rate gains resulted in a steady increase in population during the next 50 year period reaching a peak of 12,917 in 1900. By 1910, however, the population trend had reversed, and an over-the-decade decline of almost six percent from 1920 to 1930, 5 percent from 1930 to 1940, 10 percent from 1940 to 1950, and over 27 percent from 1950 to 1960.[3]

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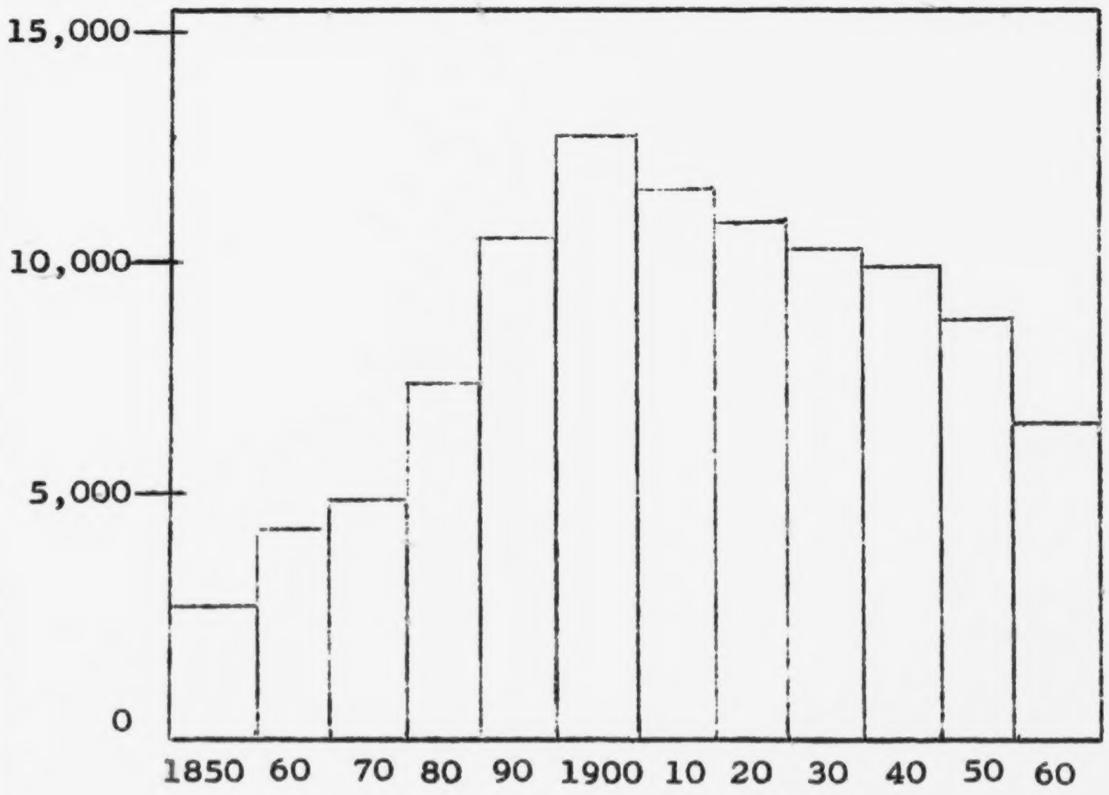
[3] Employment Security Division, Arkansas Department of Labor, Economic Base Report: 1963. (Little Rock: Department of Labor Printing Office), I, p. 8.

CHART I

TOTAL POPULATION
THE SALEM AREA, 1850 - 1960



SOURCE: Employment Security Division, Arkansas Department of Labor, Economic Base Report: 1963. (Little Rock: Department of Labor Printing Office), I, p. 8.

From 1960 to 1961, an estimated net loss of 159 occurred which more than offset the natural increase in county population of 42 (births over deaths). An estimated 6,498 persons resided in the area in July 1961.[4]

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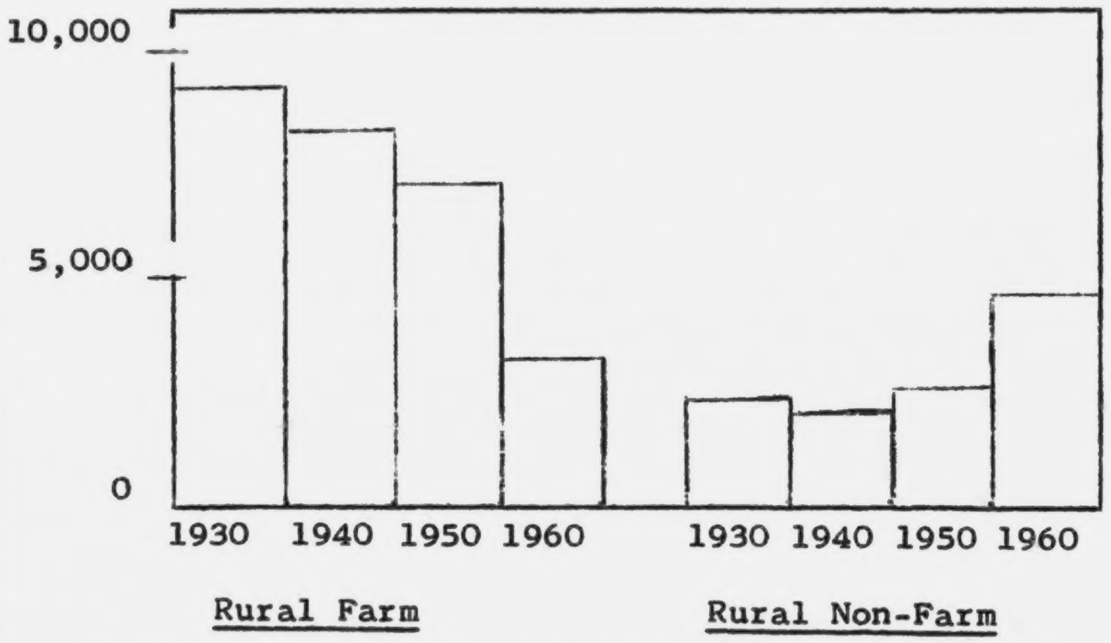
[4] Ibid., p. 8.

There has never been an urban center (by U.S. Census definition) of 2,500 persons or more in the area. The greater portion of the loss in county population in the past 30 years has been in the rural farm sections. Influenced by out-migration, as well as a movement to non-farm locations, the rural farm population declined 67 percent from 1930 to 1960.

During the 1930 period, 82.3 percent of the total county population was classed as rural farm, but by 1960 the rate had dropped to 43.5 percent. In 1960, 56.5 percent of the county residents were rural non-farm as compared with 17.7 percent in 1930. Chart II illustrates the changes which occurred in rural farm and rural non-farm population since 1930.

CHART II

RURAL FARM AND RURAL NON-FARM POPULATION
THE SALEM AREA, 1930 - 1960



SOURCE: Employment Security Division.

The percent gain in the older age group was influenced considerably by changing job requirements. Faced with limited job opportunities in agriculture and increased skill and lowered age requirements by industry, many older persons remained in the county. Also contributing to the heavier proportion of the population over 55 years of age was the longer life span of individuals.

TABLE II

POPULATION CHANGES BY AGE AND SEX
THE SALEM AREA
1930-1960 and 1950-1960

AGE GROUP	Percent Change 1930 to 1960 TOTAL	MALE	FEMALE	Percent Change 1950 to 1960 TOTAL
All Ages	- 38.6	- 40.1	- 37.0	- 27.5
Under 5	- 63.6	- 65.0	- 62.0	- 47.2
5 - 9	- 63.5	- 64.0	- 63.0	- 42.1
10 - 14	- 45.4	- 43.2	- 47.5	- 23.4
15 - 19	- 52.9	- 52.8	- 52.9	- 29.8
20 - 24	- 73.7	- 73.0	- 74.5	- 60.7
25 - 29	- 60.7	- 69.6	- 52.0	- 56.8
30 - 34	- 41.3	- 43.1	- 39.6	- 37.4
35 - 44	- 27.0	- 30.7	- 23.2	- 28.8
45 - 54	- 8.3	- 13.1	- 3.0	- 7.8
55 - 64	+ 20.8	+ 11.8	+ 31.5	- 10.2
65 - 74	+ 68.8	+ 62.1	+ 76.8	+ 7.0
75 & Over	+ 97.4	+ 85.5	+113.3	+ 61.4

SOURCE: Employment Security Division, Arkansas Department of Labor, Economic Base Report: 1963. (Little Rock: Department of Labor Printing Office), I, p. 10.

Influenced by the population loss in all age groups, except those 55 years of age and over, the median age of Fulton County's population rose from 27.7 years in 1950 to 36.7 years in 1960.

Persons 14 years of age and over made up 70.7 percent of the population in 1950; whereas, in 1960 this group accounted for 74.8 percent of the total.

A minor decline in the male percentage to the total population has occurred during recent decades. In 1930, males constituted 51.3 percent of the total population. By 1940, the percentage of males had moved to 51.7 percent. In the last two decades the percent of males to total population has dropped to 51.5 percent in 1950 and to 50.1 percent in 1960. The population of Fulton County as of 1960 was predominantly white. Only one-tenth of one percent were non-whites.

The median school year completed by persons 25 years of age and over in 1960 was 8.5, slightly below the state's median of 8.9. In 1950, both the county and the state median school years completed stood at 8.3. All levels of school years completed declined between 1950 and 1960 with the exception of the high school and college groups where respective gains of over 34 percent and almost 46 percent were shown. Of the group 25 years of age and over in 1960, only 33 percent had an eighth grade education, almost 16 percent had a high school education, and only two percent had completed four or more years of college.

Table III on page 17 reflects the deplorable condition of education in this area of the state. The sharp decline in school attendance at the end of the eighth year is of major concern to planners of this model school program.

TABLE III

YEARS OF SCHOOL COMPLETED, 25 YEARS OF AGE AND OVER THE SALEM AREA, 1950 and 1960

YEARS OF SCHOOL COMPLETED		1960 TOTAL				1950	PERCENT CHANGE
		NUMBER	PERCENT	MALE	FEMALE	NUMBER	1950-1960
Total - 25 Years and Over		4,038	100.0	1,981	2,057	4,865	- 17.0
No School Years Completed		57	1.4	38	19	70	- 18.6
Elementary	1-4	444	11.0	299	145	565	- 21.4
	5-6	467	11.5	253	214	635	- 26.5
	7	443	11.0	172	271	570	- 22.3
	8	1,324	32.8	606	718	1,750	- 24.3
High School	1-3	631	15.6	289	342	470	+ 34.3
	4	423	10.5	201	222	470	- 10.0
College	1-3	169	4.2	68	101	185	- 8.6
	4 or more	80	2.0	55	25	55	+ 45.5
School Years Not Reported		-	-	-	-	95	
Median School Years Completed		8.4		8.4	8.5	8.3	

SOURCE: Employment Security Division, Arkansas Department of Labor, Economic Base Report: 1963. (Little Rock: Department of Labor Printing Office), I, p. 11.

Location and Historical Background

The Salem area is defined to include Fulton County in its entirety and a part of Izard, Sharp, and Baxter Counties in Arkansas, and Ozark, Howell, and Oregon Counties in Missouri. Fulton County is located in the extreme north central part of Arkansas, encompassing a land area of 608 square miles. It is bounded by Sharp County on the east and southeast, Izard County on the south, Baxter County on the west, and the state of Missouri on the north.

On December 21, 1842, Fulton County was created from territory which had formerly been a part of Izard County. The county was named for William S. Fulton, last governor of the Arkansas Territory. After a short temporary location at the house of Peter Ground, the county seat was established at Salem in 1843.[5]

William P. Morris donated the land for the county buildings soon after the county was formed and sold home sites to the first settlers. The first post office was established at Salem in 1844. The city, situated at the foot of a knob-like mountain now known as Salem Knob, was incorporated in 1900. Having failed to function properly, it was re-incorporated in 1945.[6]

Salem, located near the center of the county, is 148 miles north of Little Rock, the state capitol, 160 miles northwest of Memphis, Tennessee, 260 miles southwest of St. Louis, Missouri, and 374 miles northeast of Oklahoma City, Oklahoma. Since Salem is the county seat, it continues to be the focal point of county activities (See Map I in Appendix D).

Mammoth Spring, the largest city in the area, is located in the northeast corner of the county, contiguous to the state of Missouri. The natural attractiveness of the unique and tremendous spring at this city had created a settlement as early as Civil War days. When the railroad came through the county around 1882, a group of people formed a combine and bought up nearly all available property in the area with the idea of selling it to the railroad for its shops and junction point. The railroad shops were, however, located north of Mammoth Spring, just over the state line, near Thayer, Missouri. The land owners, in turn, formed a "Spring City Development Corporation," laid out the town, built a dam as a power source and established a cotton mill, flour mill, shoe factory, and stave mill. The town was incorporated as Mammoth Spring in 1889. Various economic factors ultimately forced all of the mills out of production.[7]

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[5] The Arkansas Almanac. (Little Rock, Arkansas: 1962), p. 16.

[6] Employment Security Division, Arkansas Department of Labor, Economic Base Report: 1963. (Little Rock: Department of Labor Printing Office), I, p. 3.

Two main trade routes cross the county: U.S. Highway 62, which enters from the west through Salem where it turns to the southeast; and U.S. Highway 63, which enters the area from the north at Mammoth Spring and runs to the south across the eastern edge of the area. State highways include numbers 9 (paved) and 223 (graveled). These major highways and various limited county roads connect with other federal and state highways outside the area, thus providing routes to Springfield, Jefferson City and St. Louis, Missouri; to Memphis, Tennessee; and to

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[7] Arkansas Industrial Development Commission, Mammoth Spring Industrial Report (1963), p. 62.

Little Rock, Arkansas. Markets at these cities and other points are accessible daily by train and/or interstate bus. Daily and weekly freight truck service is operated in the county out of terminals from Batesville, Arkansas, West Plains and Alton, Missouri. Fulton County does not have an airport, but commercial air service is available at Jonesboro (Craighead County) and Harrison (Boone County), Arkansas. A privately owned landing strip, which is open to the public, is located in adjoining Sharp County near Hardy. Distances from the Salem area to large national markets are shown on Map I. Map II provides data on distances to small cities and towns located in and near the county boundary.

Topography

Fulton County is located in the foothills of the Ozark Mountains. The topography consists mainly of rolling hill country with elevation levels ranging from 500 to 1,000 feet above sea level.[8] Surface water in the county is provided by Spring River, South Fork and Myatt Creeks, and Norfork Dam (federal power dam). The Norfork Dam and lakes developed therefrom are contiguous to the county's western border. All streams in the county flow in a generally south to southeasterly direction.

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[8] The Arkansas Almanac (Little Rock, Arkansas: 1962 Edition), p. 21.

Climatology

Fulton County has a somewhat moderate climate throughout the year. Annual temperatures average about 60 degrees Fahrenheit. Selected climatic data for Fulton County is as follows:

Mean daily maximum temperature	71 degrees
Mean daily minimum temperature	51 degrees
Normal humidity	
Mean daily noontime	57 percent
Mean daily midnight	79 percent
Maximum temperature of 90 degrees and over	53 days
Minimum temperature of 32 degrees and under	45 days

The county's annual average rainfall is from 45 to 50 inches. Normally, the growing season ranges from 190 to 205 days per year.[9]

Work Force Data

The civilian work force in Fulton County moved downward from 2,775 in April, 1959 to 1,785 in April, 1960, for a decline of over 35 percent. While both agricultural and nonagricultural employment shared in this loss, the heavier shrinkage occurred in agricultural activities. At the same time, work force participation moved from 42.8 percent in April, 1950 to 35.8 percent in April, 1960.

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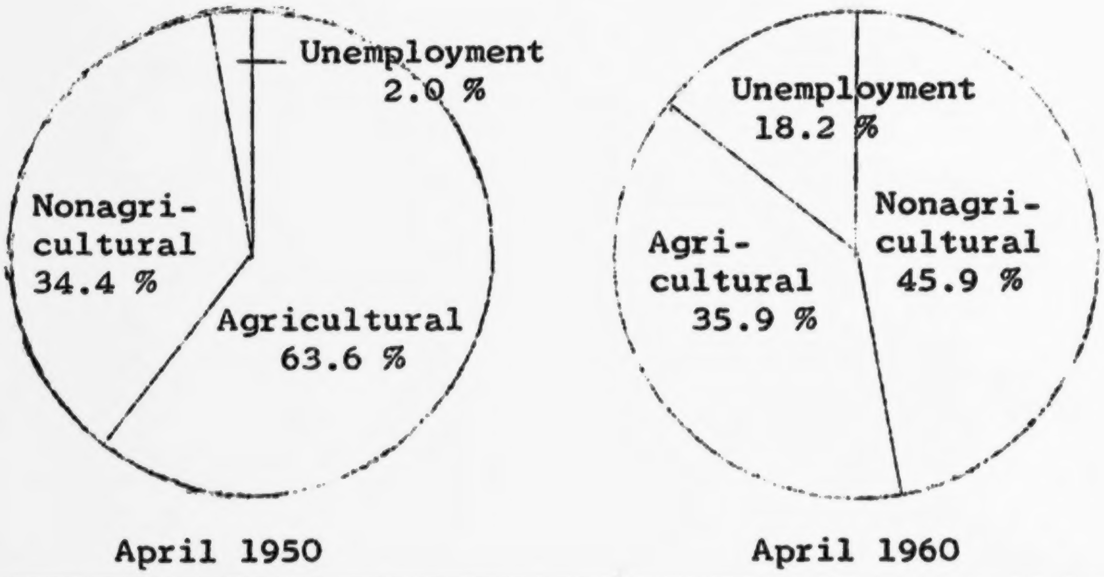
[9] Employment Security Division, Arkansas Department of Labor, Economic Base Report: 1963. (Little Rock: Department of Labor Printing Office), I, p.4.

The volume of unemployment in 1960 was nearly six times as high as that of 1950. Jobless workers numbered 325 at mid-April, 1960, 270 more than in April, 1950. The increase in unemployment between April, 1950 and April, 1960 was attributed to fewer nonagricultural job opportunities and a major contraction in agricultural activities.

Out of every 100 workers 18 were jobless in April, 1960, as compared with 2 out of every 100 in April 1950. As a result of the high rate of unemployment practically all of the successful high school graduates leave the county and do not return. This constant drain of the top young people out of the area poses as one of the greatest problems facing this impoverished area.

CHART III

PERCENT OF CIVILIAN WORK FORCE
THE SALEM LABOR MARKET



Per Capita Income

In 1960 there were 2,128 households in the area, 437 less than in 1950. County median income of families and unrelated individuals moved up from $983 in 1950 to $1,645 in 1960.[10] Area per capita income for 1960 was $956.[11] Fulton County's 1960 per capita income was considerably less than the state's per capita income of $1,338 and the national per capita income of $2,223.[12]

Limited Conveniences

Two privately owned telephone companies serve the area. Approximately three-fourths of the area is served by the Hardy Telephone Company. The remaining portion, or the northeastern section of the county in and around the town of Mammoth Spring, is serviced by the South Missouri Telephone Company. Over 620 subscribers are served by the two companies. Informed sources indicate a steady rate of growth at both utilities since 1962.

Salem, Mammoth Spring, and Viola have the only municipal water systems in the county. The remaining number of county communities and residents depend on individual private water supplies, which consist mostly of dug and drilled wells.

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[10] Employment Security Division, Arkansas Department of Labor, Economic Base Report: 1963. (Little Rock: Department of Labor Printing Office), I, p. 25.

[11] *Ibid*., p. 25.

[12] U.S. Department of Commerce, Survey of Current Business, XLI, No. 8 (August 1961), p. 132.

There are no public owned sewerage systems in the county. The city of Salem will soon become the first to have a public sewage system. Construction is now in progress, and the completion date is set for December, 1966. The present sewage disposal devices for all communities and rural areas consist of individual septic tank systems and privies.

Two companies furnish the county with electrical power. The extreme northeast section of the area (Mammoth Spring) is served by the Arkansas-Missouri Power Company. The remaining portion of the county is served by the North Arkansas Electric Cooperative, Inc., with headquarters located in Salem, Arkansas. These two companies can provide an unlimited supply of electricity to almost any point in the area.

Natural gas presently is not available in the county, but liquified petroleum gas is utilized, mainly for heating and cooking purposes.

Advertising Media

Two weekly newspapers are published in the area.[13] The *Salem Headlight* has a circulation of 1,946. Advertising rates are 63 cents per inch, or 4½ cents per line. The *Mammoth Spring Democrat* has a circulation of 675. Its advertising rates are 49 cents per inch or 3½ cents per line.

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[13] *Arkansas Newspaper Ratebook* (Little Rock, Arkansas: Arkansas Press Association, 1962), pp. 4,6.

No radio or television stations are located in the county. Radio network programs are received in the area from stations at West Plains, Missouri, Thayer, Missouri, and Mountain Home, Arkansas. Through the use of cable connections all major television networks are available to the area.

Existing Programs and Facilities

Six public school attendance areas are located within bussing distance of the proposed model school at Salem. None of these districts are financially able to operate, nor have a sufficient number of students to justify, an adequate school program of a comprehensive nature. One of these districts is a county unit which does not operate a school and which transports its children to Bakersfield, Missouri, and pays tuition. The other five districts are now operating a public school with grades from 1 through 12 in each.

It should be noted that there are no programs in the area which offer instruction in art, music, speech, drama, debate, band, foreign language, reading, journalism, economics, sociology, psychology, office practice, drawing, crafts, industrial arts, or any special vocational training such as mechanics or electricity. Only one of the schools offers trigonometry and physics; two curriculums include chemistry, and none offers more than the four basic requirements in language arts. Students graduating from the Class C school are forced by limited curriculum to take every subject offered; this includes two and one half units of home economics for both boys and girls.

As reflected by records on file with the State Department of Education, the 1966 programs were narrow and primarily college preparatory. The school, class, organization, and number of units of credit are given in the table below:

TABLE IV

SCHOOL, CLASS, ORGANIZATION, AND CREDITS OFFERED

SALEM	CLASS A	ORGANIZATION 6-6	CREDITS 30.5
Language Arts	4	Math	5
Social Studies	4.5	Science	4
Physical Education	1	Vocations	12
VIOLA	CLASS A	ORGANIZATION 6-6	CREDITS 23
Language Arts	4	Math	3
Social Studies	2	Science	3
Physical Education	1	Vocations	10
MAMMOTH SPRING	CLASS B	ORGANIZATION 6-6	CREDITS 21.25
Language Arts	4	Math	3
Social Studies	5	Science	3
Physical Education	1	Vocations	6
Glee Club	.25		
VIOLET HILL	CLASS B	ORGANIZATION 6-6	CREDITS 20
Language Arts	4	Math	2
Social Studies	2	Science	2
Physical Education	1	Vocations	9
OXFORD	CLASS C	ORGANIZATION 6-6	CREDITS 16
Language Arts	4	Math	2
Social Studies	3	Science	2
Physical Education	0	Vocations	5

A visual survey of school plants in the area is depressing. The buildings are basically of wood and native stone construction, heated with wood, poorly lighted, and flexibility is nil. There is no way to determine the actual value of present facilities belonging to the school districts in the area short of having qualified appraisers examine and appraise the construction. The records of the State Department of Education carry a listing of property values as reported by superintendents on their annual reports. There is no common criterion used in Arkansas to insure a reasonable or accurate estimate of the value placed on older school facilities. A close examination of existing facilities in Fulton County reveals that several out-dated and totally inadequate buildings are still in use.

These same buildings represent a considerable part of the total amount placed on the value of school property as reported by the superintendents' annual reports. In some cases buildings may represent a liability rather than an asset since there is the potential cost of demolition. An example of this is represented by the "old gym" at Salem, which is valued at $2,000. The building is condemmed; it has not been used in several years and removal presents a major and expensive problem.

The value of school property as reported to the State Department of Education on the annual reports for the year ending June 30, 1966, estimates the value of Fulton County school assets and liabilities as indicated in the table on page 28.

TABLE V

VALUE OF PROPERTY (Estimated)

DISTRICT NO.	NO. CLASSROOMS	VALUE
2	16	$208,000
10	0	- 0 -
15	18	233,500
30	24	354,000
TOTAL	58	$795,500

TABLE VI

BONDED DEBT (Actual)

DISTRICT NO.	COMMERCIAL BONDS	REVOLVING LOAN	TOTAL
2	$ 36,500	$28,443	$ 64,943
10	- 0 -	- 0 -	- 0 -
15	- 0 -	8,783	8,873
30	123,500	27,622	151,122
TOTAL	$160,000	$64,848	$224,848

Often consolidation of two or more school systems is blocked because of heavy debts and lack of borrowing power, which in Arkansas is now 18 percent of the assessed evaluation. This should not be a problem in Fulton County. The estimated 1966 evaluation is $4,500,000 and at 18 percent, this give the county a potential borrowing power of $810,000. Since the present indebtedness is placed at $224,848, this leaves an immediate potential equal to $585,152.

The writer believes that the county should hasten to cooperate in the Salem Model School project which offers exemplary conditions for grades 9 through 12 with buildings, facilities, and programs that cannot be obtained by any single school in the county without the cooperation of other districts. Since these model facilities are to be federally financed and will not incur additional cost for the local districts, this will make it possible for the available local money to be used to up-grade the elementary and middle schools which are presently inadequate.

CHAPTER III

RELATED LITERATURE

A limited search of literature did not reflect professional accounts of previous educational adventures comparable to this project. Therefore, it has been necessary to research projects that have been pioneered in other systems such as team teaching and modular scheduling in the El Dorado Public Schools, television instruction in the Oklahoma City Public Schools, telelecture in the Pine Bluff High School, appropriate placement and ungrading in the Melbourne High School, ungraded classes and the Trump Plan at Norridge High School, and the individualized approach to total education exemplified at the Nova School in Florida.

Optimum Size of High School

The proposed model school is being planned to accommodate 635 students in the upper four grades, or an average of 158 students per grade level. School authorities tend to agree that a high school of this size can offer an educational program that is basically sound at an economical figure in cost per pupil. All literature reviewed on this subject indicated that the author thought and wrote in terms that referred to a "graded" high school. Under the graded system it is necessary to provide for individual differences on at least three levels in each grade. The ungraded approach disregards the grade level and concentrates on providing a level of instruction to meet the individual needs. This system is especially adaptable to small high schools where limited offerings and scheduling problems have always plagued the graded high school.

Conant in The American High School Today (1959) said that financial considerations restrict the course offerings of the small high schools. As the curriculum is narrowed, so is the opportunity for a meaningful program. Unless a graduating class contains at least 100 students, classes in advanced subjects and separate sections with all classes become impossible except with extravagantly high costs.

Using Conants' criterion, one sees that a four year high school should have slightly over 400 students, depending upon the dropout rate, as an absolute minimum.

Roelfs (1960) said that less than 20 percent of Arkansas' high schools were large enough to meet the recommended minimum size of 500 which most authorities agree is necessary to provide an adequate comprehensive program at an economical cost.

A Michigan State graduate student, Strolle (1955), included in his criteria of adequacy the recommendation that a school have 900 students in kindergarten through grade 12.

Cushman (1951) said that an "ideal" school district would be one with approximately 1,500 to 1,600 students enrolled in 12 grades.

Bohne (1950) thinks school districts which range in size from 2,000 to 3,000 are large enough to operate in an economical manner and provide a good instructional program, but that they cannot usually supply a complete program of services until they can enroll approximately 14,000 students.

The committee for the White House Conference (1956) concluded that each high school should have a minimum of 300 pupils, or 75 pupils in each age group and 12 full time teachers. They predicted gaines in economy and efficiency until the enrollment reached 700 pupils.

In a recent bulletin the National Commission on School District Reorganization included in their list of criteria for reorganization the minimum of 1,200 students age 6 to 18 and a faculty of at least 40 teachers.

Broach (1953) in his study conducted from the University of Arkansas found Arkansas schools had a preponderance of college preparatory curriculums with the possible exception of vocational agriculture, home economics, and limited business courses. He also concluded that a high school needs a minimum of 300 pupils enrolled in order to offer a balanced program at a reasonable cost. At the time of Broach's study (1953), only about one third of Arkansas' 422 school districts had over 300 students in grades 7 through 12.

Since one of the goals of the Salem Model School is to encourage reorganization it is relevant here to note that little is being done on a voluntary basis to improve Arkansas education through any type of reorganization.

There are presently (1966) 403 school districts in Arkansas. Only 19 districts have been reorganized since Broach made his study in 1953, a total of 13 years. Based on Conants' recommendation that a school should be able to graduate 100 seniors each year, it can be assumed that the absolute minimum enrollment necessary to do this would be 1,200 students. At this writing only 97 of Arkansas' 403 districts has an enumeration (1966) equal to or greater than 1,200 students in grades 1 through 12.

By voting on an act in the fall of 1966 to require all schools with 400 or less students to reorganize, Arkansas voters will determine the future of 134 such districts over the state with a total combined enrollment of 33,293. Even if this act is adopted, many independent school districts will still legally meet the requirement in numbers, but fall far short in programs to meet the educational needs of rural Arkansas children.

The related literature reflects that approximately 81 percent of the writers surveyed contended that a school with fewer than 500 students cannot hope to meet the basic educational needs of children at a reasonable cost. Only 14 percent favored the opinion that schools may be justified to operate with less than 500 enrolled. Five percent favored reasons other than a minimum number as the determining criteria, and no writer favored a high school with more than 2,000 students.

Reorganization of the Fulton County Schools and the Oxford and Violet Hill Schools in Izard Counties with the Model High School at Salem serving as the new educational center seems to be the most defensible plan at this time. The total school enumeration (1966) for these six districts was 1,924, with 635 in high school, grades 9 through 12.

Individualized Instruction

There is one common philosophy accepted by a preponderance of those who write and speak for education today. Instruction must be "individualized" if it is to meet the needs of all students. How it is to be done for best results is being debated by current writers in this field. More recent literature reflects the desirability of better staff utilization, flexible scheduling, variable grouping, the nongraded approach, and better planning and use of facilities and communication media as the most promising tools of instruction to meet individual needs. Literature since the early 1950's has continued to stress the desirability of these practices; but there are few, if any, examples in the country today where the system is using all these relatively new approaches to meet their needs. There are several schools using one or more, but not all, the foregoing innovations.

Brookhurst Junior High School in the Anaheim Union High School District in Anaheim, California, has introduced drastic changes in the structure of the instructional program. Rather than eliminate the slow student, alter courses, or add an additional period to the school day, they felt that the quality of the educational program could best be improved by changing the basic structure of the educational system. The most serious block to the improvement of the program appeared to be the rigid and static schedule imposed upon teachers. Therefore, they concentrated their efforts on improvement of the educational program with a time schedule controlled by the teacher rather than a need for conformity and convenience as seen by the principal.

In discussing the objectives of a flexible scheduling program, no one has developed any new or startling concepts. Dr. J. Loyd Trump in his book Focus on Change-Guide to Better Schools defines what later became the Brookhurst objectives. The primary objective of the Brookhurst Daily Master Schedule was to accommodate pupils' changing need as observed by teachers.

In an attempt to challenge the students a program of flexible scheduling was initiated in 1962-1963 at Brookhurst. It is based upon several assumptions:

1. Subjects to be taught because of their importance require different amounts of time. All classes need not meet the same number of periods per week or the same amount of time each day.
2. Students learn at different rates of speed.
3. Youngsters grow physically, emotionally, and intellectually at varying rates throughout the school year. The school program must be flexible enough to accommodate the changing development of each youngster.
4. The principal gives to the teacher the control of time.

5. Teachers possess different and varied abilities. Not all teaching jobs need the same skill, preparation, or time allotment.

6. Students are capable of personal responsibilities and can make mature decisions.

7. Time allotments, methods of teaching, student grouping, teachers' and pupils' activities are delegated as a teacher-counselor responsibility, not administration. Professinnal teachers are trained in the area of curriculum and instruction and should be allowed to determine group abilities, units of instruction, amount of time needed to accomplish objectives of unit, and the facility best suited to method of instruction.

8. Learning is more important than teaching; learning can take place without the teacher. Students can learn from each other or independently.

9. Substantial improvement must take place in the instructional program; the teacher has the obligation to innovate and to create ways to improve instruction.

At Brookhurst both student and teachers combine efforts to develop a daily student schedule. Basing their decisions upon daily evaluation of student progress, teachers decide who should be called to their classes, what specific lesson should be taught, how long it will take, what teachers should teach the lesson, what size and type of group the class should be, what educational equipment should be used, and what space is needed to contain the learners. These faculty decisions are submitted daily, and the subject and time request are placed on a master schedule.

Students report to their teacher counselor each morning before school begins to make decisions regarding their school schedule for the next day. Because teacher demands and student needs change daily, there is a different schedule each day of the school year. Each student has modules committed for him by the teachers; however, the modules or time not committed by the faculty may be utilized by the students as they wish. Students, therefore, can make decisions daily regarding subjects to be taken and time to be spent in the electives, various resource centers and labs.

Brookhurst students have demonstrated superior achievement with significant critical ratios in comparison to comparable control schools. In the four years of the program Brookhurst has not lost a student via the dropout route. Daily decision making has developed initiative and creativity on the part of the faculty and the students. As the bells and the rigid walls have disappeared, so has the lock-step of student achievement.

The El Dorado, Arkansas, High School was designed to serve as the educational control center of the entire school system. The El Dorado plan features the educational service center which relates the school of language, arts and social studies, and the school of mathematics and science to lecture halls and independent study stations.

The El Dorado School Board President, R. Yost McKinnery (1963) said:

> The new Senior High School building was planned, designed and built to serve as a fundamental part of putting into maximum effectiveness our philosophy of education. Stated simply, the function of this school system is to provide sound training in the fundamental ways of thinking represented by history, science, mathematics, literature, art,

> language, music, health, and the other disciplines evolved in the course of mankind's long quest for usable knowledge, cultural understanding and intellectual power.
>
> We believe that this training must be provided on an individual basis with opportunity and challenge to each student to learn and to achieve at the fastest rate possible. This new high school provides the physical facilities essential to such a program. Its flexibility enables the district to make adjustments to the educational program as it develops down the years.[1]

G. A. Stubblefield, Superintendent of El Dorado Schools (1965), expressed their purpose thusly:

> Over a period of several years, the El Dorado Schools have been working on a program of instructional improvement. In these years of study we have emphasized the departmental approach in order to meet better the needs of individual students to make it possible for every boy and girl to work at his or her intellectual capacity. The new senior high school building is designed to help us achieve this purpose. We sincerely believe that this building will do this.[2]

Harold E. Smith (1963) remarked,

> El Dorado's new senior high school was carefully designed to house its modern program of instruction, the El Dorado Plan. Flexible classrooms, large group lecture centers, seminar rooms and independent study carrels provide the proper setting for team teaching, large group instruction, small group instruction, and independent study. With these facilities, with our dedicated professional staff, who work with a great spirit of teamwork, our objective of 'individualized instruction' will be achieved. The El Dorado Plan definitely provides - "A plan for progress."[3]

In The El Dorado Plan (1963) team teaching was employed in limited areas. Large group, small group, and independent study techniques were employed by all teachers in the language arts and social studies departments.

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[1] The El Dorado Plan (1963), p. 2.

[2] Ibid., p. 3.

[3] Ibid., p. 3.

The following arrangements were used:

A Block Arrangement consisted of a large group of students who had the same schedule for two periods. A block arrangement provided for large group, small group, and independent study through team teaching.

A Back-to-Back plan involved two teachers of the same subject with classes scheduled at the same period. The teachers formulated plans, shared ideas, and at given times instructed the two classes as a large group.

Unit Specialists were teachers of the same or related subjects who enriched content matter by sharing their fields of specialization.

The Small Group was being used in all arrangements and in some subject matter areas where the number of students enrolled in a class was small enough for this group technique to be used.

In The El Dorado Plan (1964) all students were placed in large and small groups. The school day was divided into 14 modules of time; each module was 25 minutes in length; five minutes was allowed for passing.

Class time varied; some had 25 minutes, others 55 minutes, 85 minutes, and 115 minutes. The length of the class interval was determined by the learning experience.

Large group lectures were usually scheduled for one module of time. Small groups were scheduled for one or more modules of time. There were still some classes that followed the traditional pattern.

Skill classes, such as industrial arts and homemaking, now had longer periods per day and fewer meetings per week. Labs were scheduled for adequate periods of time. Allocation of time for subject areas was agreed upon by teachers and submitted to the administration for approval.

Stebbins (1963) describes how the city of Flint, Michigan, has attacked many of its social and community problems by making the school an integral and important part of its neighborhood. Adult education classes are offered in all of the Flint schools, with over 7,500 citizens of greater Flint enrolled in over 1,200 courses. If 12 people request a course, it is offered. Courses range from cake decoration to physics and astronomy. Classes are taken to learn new hobbies, to earn a tardy high school diploma, or to learn a new skill in job upgrading.

Retraining and upgrading in the areas of un- and semi-skilled labor frequently involve classes in the Adult Education Program. Just as often, new classes are begun in "service" fields - namely, automotive mechanics, electrical repair, waitress and secretarial training. In numerous instances the job applicant and the Mott Retraining Program work with the Michigan Employment Security Commission, testing and directing the upgrading candidate toward greater job security.

Recreation is fun and physical fitness on the surface, but the deeper purpose of the community school director is to change poor attitudes.

Bloom (1956) lists the new outcomes of education in rising order of ascendency as:

1. Knowledge
2. Comprehension
3. Application
4. Analysis
5. Synthesis
6. Evaluation

Head (1966) said:

> We should ever bear in mind that the unknown is infinite. No person, regardless of his pretensions, glimpses more than an infinitesimal fragment of the truth. To merely focus the gaze of one's followers down that narrow aperture of understanding glimpsed by the "leader" is no service to anyone. The successful teacher inspires others to join in the search for truth, on their own volition and power; and growth in knowledge and understanding takes place only to the extent that some of his students surpass him. No leader or teacher ought to be satisfied with anything less than this.[4]

Howard (1965) has operated Ridgewood six years utilizing a modular schedule. Each year has brought greater progress in efficiency and flexibility. A number of problems have been solved only partially and a number of questions have not been answered. At this point he feels that the modular schedule of limited flexibility shows great promise. Its major function is to free teachers, administrators, and students so that they may make the kinds of decisions which are needed if the benefits of an independent learning program is made available to large numbers of high school students.

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[4] Leonard E. Head, Wanted: Thinkers, Not Followers, The Foundation For Economic Education, Inc., (July 1966), p. 63.

Smith (1961) thinks that if students have information to exchange, seminars can work. This information is obtained partly through lectures and largely through individual study.

Belford (1961) says that most lectures are, in the fullest sense, a team project. Many are prepared, and some are presented by several teachers.

Heller (1961) feels that the seminar teacher should try to get the pupils to carry the discussion, but he is just as much a part of the learning situation as he can be in any other classroom, perhaps more so.

Howard (1964) believes the forces now at work in the schools are growing in their demands for change. One of the strongest of these is the trend toward individualization and personalization of instruction. The movement is being spurred along by the recent advent of a large variety of technological aids. Some of the most significant of these are the carrels, laboratories, paper graders, and television. He feels that it is past time when educators should question the premises which have governed grouping of students for instruction. Ungrading the school is one method of removing artificial organizational barriers.

In addition, he holds that the curriculum should provide for programmed instruction which must be presented through a laboratory setting for best results and that the greatest promise of new organizational patterns lies in the combination of team teaching and flexible scheduling.

Richardson (1965) concludes that the need to continuously update curricular materials and methods in science teaching and the need to consider the interrelationship of the content of science courses requires a staff communication process that stimulates growth on the part of each individual teacher. Team teaching furnishes an impetus that carries the beginning teacher beyond the borders of a special discipline to a point where he becomes involved with science teaching as a vibrant enterprise and not a comfortable, mechanical dissemination of facts.

The growth in competence of all science teachers must be continuous in order to utilize the advances in knowledge and methodology to best advantage.

Howard (1964) admits that problems have arisen at Norridge that have not successfully been solved, but, if the faculty was given the opportunity to switch back to an orthodox organization they would refuse.

Prouty (1966) says the mission of education ought to be to give each child the chance to work at his own level and to progress as far and as fast as his ability to learn permits and that it follows that it should be the mission of this nation to via the exceptional child at least the ordinary opportunities to learn, even if this requires extra-ordinary measures.

Brown (1965) believes that appropriate placement of each student in each field of study is the best known way to meet the individual needs of that student. He thinks reading is the most important subject offered in his curriculum and tries hard to see that every student has the opportunity to learn to communicate.

Brown (1965) doubts that there are as many "slow learners" or "under-achievers" as have been identified as such. Many of these may not be "slow learners" at all. They are simply students who have made no commitment to learning. The components of any new curriculum should be particularly interested in reaching those who can learn, but haven't.

Brown (1965) strongly recommends that schools be designed to meet the specific needs dictated by new programs of flexible learning.

Trump in his Guide To Better Schools says:

> In tomorrow's schools, the points of entry to and exit from elementary, secondary, and higher schools will be determined by each student's mental and emotional maturity -his readiness to move on-and by his capacity for organized instruction. This will require professional decision. Today's school settles entrance to and exit from school by clerical decisions; date of birth and number of credits are the determining factors. The curriculum will be divided into stages or steps not identified as years or grades, and without any fixed number. The rate of progress through school will be determined by the student's previous achievements and by his capacity to take the next step.[5]

The Statement of Melbourne High School Philosophy (1963) relates that whatever may be the limitations which stifle inquire elsewhere, Melbourne High School should ever encourage curiosity and inquiry, being mindful that imagination is as important as knowledge.

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[5] Trump and Baynham, Guide To Better Schools (Chicago: Rand McNally and Co.), p. 55.

Waetjen (1966) says that in his opinion nothing erodes motivation more than constant exposure to the predictable and familiar situation and that school environments should have some element of unpredictability that would frequently render a student "off balance" and require him to gain some information in order to feel comfortable again.

Thiel (n.d.) remarks that an English program in which each student progresses at his own rate is being developed at Shawnee Heights High School, Topeka, Kansas. This was the topic of an English round table discussion at Fort Hays College during the Kansas State Teachers Association convention in November, which was attended by Mrs. Mildred Green and Mrs. Gerald Demel of the NCHS faculty.

The Shawnee Heights system, called The Non-Graded English Program, is working in the new school of about 400 students. Miss Frances Mckenna, a teacher in the program, described the system to the round table members.

The essential difference of the program from the usual high school English sequence is that students are classified according to their abilities or capacities to do work instead of the class groupings of freshmen, sophomores, juniors, and seniors.

All students take the course. Students are assigned to the different sections on two bases: (1) results shown on standardized tests and (2) faculty recommendations.

A student stays in the same section for all four years unless he petitions to be moved; this he may do at any time. There may be freshmen, sophomores, juniors and seniors in any one section.

Brown (1964) principal of the Melbourne, Florida, high school, "where the library is larger than the gymnasium," believes school libraries can be made much more useful learning centers by the application of some thoughtful planning.

The library should be enlarged or a new one constructed to house increasing numbers of students. The modern junior or senior high-school library should house at least 25 percent of the student body at any one time. The school library should be carpeted for sound privacy and air conditioned for comfort.

Coffin and others (1965) say the appropriate placement school has a special commitment to youngsters who have not learned well in the past. The very nature of learning in an appropriate curricula requires that more challenging teaching positions relate to the learning problems of the more indifferent students.

Reading is by far the most important subject in the curriculum. For this reason the learning of reading skills must take priority over all other learning. In the nongraded curriculum, students who suffer from reading deficiencies should be scheduled out of conventional English classes and into a laboratory where they can receive intensive instruction in reading.

Next to reading, the most important subject in the curriculum is mathematics. The high priority given this subject is the contribution which it makes to the process of reasoning.

The new appropriate placement curriculum should follow a mixed strategy--one that does not pretend to be highly planned and one which leaves occasional learnings to chance. Its design is deliberately planned to appeal not only to the senses of learning but to the instincts of imagination as well.

The development of a variety of curriculum materials using the discovery approach precludes the need for the student to have constant resource to the teacher. The more deeply a student becomes involved in learning, the greater is his commitment. The intent is to shift the responsibility of learning from the teacher to the student.

The appropriate placement school is concerned with the establishment of an educational system in which all students can be given the opportunity for the development and utilization of their individual abilities. Students must not be allowed to become discouraged with unfair competition and, after dropping out of school, become social problems because they are unable to hold jobs due to their lack of basic education.

An intent of the appropriate placement curriculum is to undertake the development of a program especially designed to cope with the educational deficiencies which exist for many students. Through the concentrated efforts of a competent corps of teachers, an imaginative program can be brought into being which not only assists the student to remedy deficiencies in his education but which places him in a high school situation where he is accepted socially and without prejudice.

There is one final word of warning in order for schools which seriously commit themselves to the notion of innovation and change. When a school ventures to undertake new programs, it can expect to be ostracized from its neighbors.

Cooper (1965) at Melbourne remarks that history is taught through concepts such as liberty and justice. English is taught through interpretative study. In a span of three years a student will have studied literature in three areas: American, European, and World Literature. Mechanics are taught through correlated writing. Four teachers specialize in certain genre: poetry, drama, short story, and the novel. At the end of each nine-weeks' grading period, the teachers exchange students.

A recent innovation is a move away from grouping by any method to individual study or education by appointment. Fifty students are now engaged in an independent study program. Digital and Computer Networks, Microwave Technology, Investment Analysis, Viola Study, and Photographical Design are some of the areas of study.

Melbourne High recognizes that it must teach students to think--give them the facts and figures, yes, but also give them the reasons, the concepts behind them. Students must be prepared to adapt the things they have learned to a world of constant change.

Brown (1964) reveals that in addition to the intellectual changes which have taken place among the students since the establishment of the nongraded pattern, there are several important plant changes which are worthy of note. With students taking more responsibility for their own learning, it was found that the conventional high school library was no longer appropriate. It became necessary for the administration to construct a new library which, in the words of the faculty, had to be "as large as the gymnasium." This new facility was built deliberately on the lawn of the school. The purpose was to make it available to students in the afternnon and evening after the school is closed. They have also found it necessary to construct new science laboratories in such a way that they could be made accessible after school and in the evening. When Melbourne took the limits off learning, many students began to ask for longer school hours. The school under the nongraded program has, indeed, undergone some revolutionary changes.

Cotter (1966) contends that the school is partly at fault for failures suffered by its students. She lists some of these deficiencies as teacher shortages, overcrowding, inadequate facilities and materials, excessive regimentation, and poor

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administrative leadership. It would be hard for faculties to remedy some of these problems, but they can and should do something about the outdated and unsuitable curriculum and instructional materials.

Kiseda (1966) writing about the program at Pacemaker, George Washington School in Charleston, West Virginia, said the planners broke with the traditionalists in two major areas: they discarded the standard six-seven-and eight-period school day for a flexible schedule broken into 20-minute segments, and they moved away from the fixed class of 30 to classrooms of varying sizes.

Every 20 minutes someone changes classes, but some classes run 40, 60, 80, and 100 minutes. The teachers in a subject area determine the length of their classes. Instead of fitting the subjects to a schedule, George Washington fits the schedule to the subjects, using a computer to get everybody in the right place at the right time.

There are small classrooms for seminars (12 to 15 pupils), medium classrooms for academic labs (30 to 35), and large classrooms for lectures (150 or more). The principal thinks a class of 30 is an arbitrary anachronism. He says there is no real good reason for a class of 30. It's too small for good lecture --a teacher who lectures on the same subject five times to groups of 30 is wasting his breath. And a class of 30 is too large for good discussion.

Gores (1965) says a building should implement the educational program and not get in the way of learning. Too frequently school construction does not permit the adaptability necessary for improving educational programs. Flexibility, the key to modern design, is necessary to permit a variety of classroom arrangements for small groups, individual study, large group instruction, and team teaching.

Compact design may reduce space in corridors and elsewhere and it does reduce the amount of expensive outside wall. This makes more money available for equipping the building. A modern building needs laboratory and electronic equipment. These machines do not replace the teachers, but they do provide new avenues of instruction that free the teachers for more time to prepare lessons and give individual attention to students.

Sanford (1964) believes true flexibility results when a building is designed to stay out of the way of the educational process--the activities of teachers and students. Space should permit an orderly pattern of change and should provide an environment that facilitates rather than impedes the educational process.

This design is based on the organic process--designing from the inside out. The geometric shape of the structure is dictated strictly by function of the interior spaces, and the relationship of spaces are keyed to an efficient use of both human and material resources.

Sanford further believes that the library, and teacher planning spaces should be centrally located. He suggested the use of a split-level situation so that the administrative and teacher planning spaces (on the upper level) can have direct supervision, and look down into the instructional material centers. In each one of these centers will be found resource materials to facilitate individual and small group studies. He thinks the library should contain most of the resource materials, but the sub instructional material centers should provide additional space for specialized materials that are most frequently used in the subject areas that are assigned to the academic pods.

The Conference on School Plant Accessibility (1965) thinks one of the most important motivating forces of change is the rapid expansion of new knowledge.

Educators participating in the conference believe that conventional type classrooms will soon be replaced by arenas for learning which will consist of flexible zones of space. These space zones will be so highly acousticized that they will not need to be separated by walls. New developments in acoustics are already making walls obsolete as sound barriers, and the only excuse for making walls in the future will be to provide visual privacy. They think the emerging characteristics of a greatly revamped English curriculum will call for radically different kinds of space. Unique reading laboratories must be provided for students who suffer from reading handicaps. They say laboratories must be designed for individual involvement with technological learning aids. Special speed-reading laboratories must also be provided for students wishing to acquire advanced and sophisticated techniques for rapid reading and comprehension, and the nature of modern science suggests that a much closer integration is needed between the laboratory program and the lecture and discussion phase of the course.

Those participating in the conference believe the school library will take on new significance. It will be a storage place for all kinds of information and will be operated from early in the morning until very late at night.

The school of the future, then, will be a carrel-centered operation with increasing numbers of students spending most of their time in highly individualized independent study.

They think there will be a gradual disappearance of the need for constant recourse to a teacher and this will bring about a need for radical changes in the design and furnishings of school plants. School buildings for this coming era will be larger than the conventional buildings of today. They feel the trend is positively in the direction of some type of private work space for each student, and that greater emphasis upon independent study is nothing more than the return of free enterprise to learning.

CHAPTER IV

PROCEDURES

Approval of a planning grant to plan a model school for the Salem area was made official late in January, 1966. A. R. Stroud, Superintendent of Salem Schools, had involved the local school board, the department of School Administration at the University of Arkansas, and certain members of the State Department of Education in formulating a commendable approach toward the planning of an exemplary model program. The community was made aware of the approved grant through local news media and involvement of the faculty and students.

The Salem School Board, using funds made available by the Title III Planning Grant, employed the writer as a project director to direct a study of the needs of the area and to recommend a high school and adult program to meet those needs.

A counseling program was established at mid-term during the 1965-66 school year. The first goal was to administer standardized achievement, intelligence, and aptitude test and to set up a record system that could be used in the evaluation and determination of needs of students now enrolled in school.

The first objective of the project director was to organize as quickly and efficiently as possible all pertinent information available and to formulate plans to obtain such information as necessary which was not readily available.

The Salem School Board (5 members) was the first community public relations committee aware of the planning grant and what its potential could possible mean to this area of the state. Under the law, this board was made the legal guardian of funds committed to the planning program by the United States Office of Education. The local board has been very enthusiastic about this program since its inception and have helped greatly in making the community aware of the possibilities.

One of the early steps taken by the project director was the selection and appointment of a "Committee of Ten" key educational people in the county. These teachers, the principal, and the counselor represented every major division of the curriculum from administration to counseling and from the library to physical education.

Three major functions have been served by the "Committee of Ten." The first has been to act as a resource committee furnishing any knowledge of new techniques known to be in use. The project director began immediately to organize a vast library of knowledge regarding the most promising techniques for the future. The committee has been helpful in screening the information and suggesting what materials and techniques are promising for this area. The third major function of this committee has been to act as a public relations committee interpreting the program as it progressed, and clarifying points for the faculty, students, and community when any misunderstandings threatened to arise.

A second "Committee of Ten" businessmen was approved by the project director and appointed by the administration. This committee has personnel on it that is representative of the school community: a banker, a doctor, a farmer, and participants in city, county, and state government.

The major function of this committee has been and will continue to be one of community public relations. These are the spokesmen for the project. Practically every community gathering is attended by one of these committeemen; and though he does not always make a formal presentation, he is there to answer questions or give a progress report on the project. The project director has appeared frequently at such meetings to explain the plans and to inform the public about future goals. The Sorosis Club, Chamber of Commerce, Parent Teachers' Association and local churches are examples of organizations that have been interested in the progress being made.

There have been several newsworthy stories that have grown out of this project. The local paper has carried these to the people along with favorable comments. Among the highlights have been the approval of the grant, the employment of an educational consultant to plan the project, trips made by him to visit exemplary programs, consultants who have frequented this area, the completion of the educational specifications, hiring of the architect, and the purchase of a site.

There have been unique circumstances involved in this project which have complicated the plans in organizing and promoting an area-wide public relations program.

In the first place, the Salem Model School will draw from an area that is presently made up of six separate school districts. At the outset of this proposal, it was felt that a debt-free, model school with an exemplary program would present itself as a very worthwhile answer to the reorganization problems in the area.

The first situation to arise which made this a difficult problem with which to deal was the organization of the Arkansas Rural Education Association during the early spring months and their openly defiant stand against the Arkansas Education Association and the proposal it sponsored to reorganize all schools in the state with less than 400 students.

The problem rose to the surface again and furnished political propaganda for gubernatorial hopefuls in Arkansas' primary elections during the summer, 1966. The question will be resolved by a vote of the people in the general election in November.

As a result of this situation of educational unrest and uncertainty little has been done unofficially, and nothing officially, to organize a consolidation move in the area.

This project has a great appeal to parents who are interested in quality education for their children. Many who have helped with the program believe it to be so outstanding that parents will voluntarily seek admittance for their children.

The success of the act to consolidate schools with 400 or less will hasten the time when at least five of the districts must determine what moves they will make to meet the new requirements. This is viewed as favorable for the success of the model school project. The defeat of the act will simply mean that parents within these areas must make an individual choice as to which school their youngsters will attend.

The project director and the administration have been cautious with public relation activities and news releases to date and will continue to follow the same policy until after the November election. At that time, depending upon the outcome of the Initiated Act, a new and vigorous approach will be necessary to inform all the people in the area what their choices are.

Determination of Needs

Data were compiled regarding every facet of life in this area which could have any bearing on future needs of citizens.

A list of schools and the curriculum offered in each one is given in chapter two of this dissertation. The offerings are extremely narrow and barely meet the minimum requirements for graduation in Arkansas. It can be said that they are college preparatory with the exception of vocational agriculture, home economics, and a limited offering in commercial subjects.

About 36 school age dropouts are known to be living in the area. A questionaire was prepared and administered to 19 of the 36 non-graduates. An analysis of the information gained by the questionaire and through personal interview with each of the 19 participants revealed two basic problems:

Every participant had difficulty in communication, and none of the former students felt that the curriculum met their needs which were vocationally oriented.

A recent achievement test administered at Salem indicates students are below average in comparison to the norms established for the California achievement battery.

The eighth grade scores are chosen as examples since these are the students that will make the move to the new model school each year. The California Achievement Test, Form W, was administered during the ninth month of the eighth year. The expected norm score is 8.9, N=62. The test indicated that:

1. In reading 35 students scored below the mean while only 22 students scored above.
2. In mathematics 33 student scores were below the mean, and 25 were above.
3. In language 27 scored below the mean while 35 were average or above.
4. The composite scores showed 30 students with scores below average; 27 above; and 5 registered a score identical with the expected mean.

A visual inspection of school facilities revealed extreme inadequacies. Interviews with classroom teachers confirmed the basic problems to be a narrow unyielding curriculum, a lack of teaching materials and supplies, and an inability to meet individual needs of students under present conditions.

The needs of rural young people can be met to a greater extent through a comprehensive high school program designed to individualize instruction.

Visits to Exemplary Programs and Facilities

As soon as the project director had determined the basic needs and objectives of the new school, an extensive visitation program was planned and implemented. Schools were selected because of their philosophy, program, organization, or unique facilities. When the Salem Model School becomes a reality, it can truthfully be said that it is not copied from any plan in operation today; but rather, it represents the best of many good programs operating from Chicago to Miami and from California to Carolina.

Superintendent Eugene Howard has spent four years making the Trump Plan a reality at Ridgewood High School in Norridge, Illinois, one of the growing suburban areas on the outskirts of Chicago. He does not think of his school as the Trump Plan and insists that many original adaptations have had to be made to make the plan work at Norridge. Nevertheless one feels and sees the influence of Dr. Trump's *Images of the Future*, the 1959 mandate for change on the American educational scene. In this proposal, Trump suggested ideas that are now common place in literature and educational conversation but still remain unique and promising in application. Seven years have gone by; few schools have attempted any of his suggestions, and still fewer are bold enough to attempt the whole program to the degree that it is being tried at Ridgewood.

In 1961, Howard and his associates started their own "Trump Plan" by organizing their classes in small groups (6), medium groups (12) and large groups (100). They felt the traditional group (30) was too small to be large and too large to be considered individualized.

Since the area was growing rapidly, new facilities had to be planned to meet new enrollment demands. This made it easier to change from the standard 800 square foot classroom to assorted sizes of working spaces ranging from the individual carrel to a large lecture hall.

The faculty are not considered as classroom teachers; instead, they are considered teams of instructors cooperatively utilizing spaces and blocks of time to accomplish goals which have been determined previously through teacher-pupil planning.

Only two general divisions of the curriculum have been made: humanities and science-math. These incorporate the departments of mathematics, English, history, and other subjects.

Study halls have been replaced by what Howard calls unscheduled time. The student's schedule is determined by computers, and there are blocks of time which are left unscheduled by the machine. These blocks of time are used by the student to work independently on advanced projects.

Students are accepting greater responsibility for education to the extent that some classes are being taught by students; lectures are given by students, and discussion seminars are chaired by students while the teacher remains remotely a part of the scene, available as a resource person only. The Hawthorne effect is believed to be working in this pattern where the goals and plans are changing from day to day.

Instructors frequently lecture on subjects within their field before classes other than their own. Another thing that is not uncommon at Norridge is for an instuctor to have more unscheduled time than scheduled; yet these teachers must consistantly work overtime in order to prepare for the day ahead.

Students, teachers, and administrators all admit that it would be easier to return to the graded lock-step, but they prefer the Norridge plan.

At El Dorado High School, El Dorado, Arkansas, one senses the extension of students' rights and responsibilities as individual students shift from area to area without the use of bells or buzzers. The modular schedule is handled here by computer and leaves uncommitted time, which the student may use to develop individual projects or as free study time in the library materials center.

Multiple grouping is on a more limited scale since the school employs what is called a "back-to-back" schedule where teachers responsible for different sections of a given subject meet during the same period. Teachers may move their classes together for a film or lecture and then separate for debriefing and critical analysis.

The need for a totally new high school plant was met through a well-organized planning process involving the administration, faculty, and community. The end result was a model arrangement with five schools within a school, all of these arranged around the library materials center.

At Melbourne High School, located a short distance from Cape Kennedy on the east coast of Florida, is located one of the unique programs in the country today. This is a three year school; but no student is considered a tenth, eleventh, or twelfth grader. The school is nongraded in that a student may pursue any course of his choosing regardless of his number of years in school. Based on standardized test scores, previous marks, teachers' judgment, and student's desire and determination, each student is placed in a phase according to achievement level. It is possible for a student to be in phase one in language arts and phase three or four in another subject such as mathematics or science.

The successful early years of this program owe much to Dr. Brown, principal, who has successfully developed a "state of mind" among students and faculty. The responsibility for education belongs to each individual. Candidly, most students will admit their responsibility, but those at Melbourne are accepting it as well.

The school accommodates about 1,600 students and has a staff of 80 teachers and administrators with a ratio of 20 to 1. This is a rather acceptable ratio, but it is made more attractive when one considers that certain classes such as typing, shorthand, and art may have as many as 125 students. This releases three or four teachers to work on an appointment basis with students requiring individualized help.

In 1962 the Knapp Foundation made a grant to the American Library Association of $1,120,000 to carry out a five year project to demonstrate the educational value of a complete program of library services. The project started in March, 1963, as a three-phased program. The first two phases dealt with elementary libraries; the third phase, instituted in April, 1965, set up three model libraries for secondary schools. One of these model libraries is located at Oak Park High School, Oak Park, Illinois. The school was selected because of its outstanding educational record, school program, and new comprehensive instructional materials center which contained over 40,000 volumes. The Knapp money has been used to reorganize the library to offer more efficient service and to strengthen some areas where it was felt that additional supplies and materials were needed. The facility features resource centers organized around American History, mathematics, science, and language. It is organized as a demonstration center to emphasize the need for services which can be furnished directly to each teacher in any department.

The Forsyth R-III School District at Forsyth, Missouri, has developed what is believed to be one of the most complete and adequate general shop programs to be found in any state. Students are assigned to each station in the shop long enough to develop an individual project and get "the feel" of tools and skills required in each activity. During the course of one year a student can move through the stations and still not know exactly what he wants to do or likes to do best. Robert C. Miles, Superintendent of Schools, says that what may be more important is that students find some activities they are sure they do not want to participate further in. Shop activity has a certain appeal to most students. It is an activity emphasizing personal participation. Certain activities, welding for example, appeals to many boys who after two weeks of cutting, fitting and welding steel decide that they would not be happy as a welder and do not pursue the skill any further.

The Principal at Webster Grove, Missouri, showed me through their new Plymouth Junior High School. At a cost of over three million dollars the citizens of Webster Grove had developed two strikingly modern structures geared to today's needs and tomorrow's plans. Both schools were planned to fit a particular curriculum, and the shape and compactness were primary concerns because of a limited site. Libraries were designed for service, not for study halls.

Inner courts enhanced the beauty of the facilities and invited students to remain within for protection and better supervision.

The cafeterias employed the "scramble" system--a first in the St. Louis area, and one that holds promise for larger schools.

Charles L. Renfro, Principal at West Plains, Missouri, has organized the language arts program on a nongraded basis. Students are assigned to a given sequence after achievement test are given. Past records and marks are accessed, and teacher-counselor conferences are held. The program has been so successful during its two years of operation that Renfro and his faculty are contemplating expanding the nongraded concept into other areas, probably science and mathematics, next.

Reorganization has come slowly in Arkansas, but other areas have had their problems also. The state of Missouri still has far too many small schools that would serve a better purpose as a wing with high school students attending a centralized consolidated facility.

Citizens of Knox County, Missouri, realized this; and in 1962 they moved to consolidate their 41 districts and 5 high schools. Now they have one district, one high school with 450 students, and eight elementary schools with 750 students, a total of 1,200 students.

The County Board carried the political ball by speaking in area schools, and emphasizing the need to improve education. All five school superintendents openly praised the move, and it was indorsed by the county school supervisor. The people voted 14 to 1 in favor of reorganization.

Travel and research soon revealed a definite trend toward greater flexibility in school programs and facilities to house them. Probably the most outstanding work in school house planning has been done by Educational Facilities Laboratory, an arm of the Ford Foundation. Its influence has begun to appear in the work of several architectural firms throughout the nation.

John Shaver and Company, Architects, Salina, Kansas, has been outstanding in its ability to convert new ideas in education to functional spaces with an accent on flexibility.

The writer visited the Valley Winds School in Riverview Gardens, Missouri, a pilot school which received considerable attention nationally because of its curriculum, equipment, and architecture. Ford Foundation grants totaling $23,000 helped to hire top talent to guide the project. Manufactures of equipment and materials felt that it was so unique that they were willing to donate more than $100,000 worth of their products to furnish the building.

The Valley Winds School is shaped like a snail's shell with classrooms converging from the circumference inward toward a core made up of the materials center, teachers' work and office space, the electronic nerve center, and a unique theatre-in-the-round. Every classroom in the facility opens into some part of this central core, and many of the rooms open directly into the library materials center.

Cabinets on wheels serving as desks; study carrels, file cabinets or staorage spaces are used as room dividers in the classrooms and the administrative area. Many of the rooms have no permanent walls and may be rearranged at will to form the size and shape of educational space necessary to teach a concept.

One is immediately aware of the pleasing environment that has been developed through the use of carpeting, design, and acoustical treatment. Few, if any, buildings offer more opportunity for flexibility, and the compactness of structure provides ready accessibility to every major service area.

The McPherson High School, McPherson, Kansas, is impressive as you approach it from the wide, landscaped drive. The roof line is unique in that it is a series of "poured-in-place" concrete slabs that are contoured to facilitate drainage. Compactness of design is achieved through use of "pods" that are hexagonal and made up of spaces that appear pie shaped. Within each pod of class spaces is located a small instructional materials center which serves the department. Nine of these pods and the fieldhouse make up the entire instructional facility. At the heart of the plant with commendable accessibility is the library materials center and the administrative complex.

The John L. McClellan High School in Little Rock, Arkansas, has utilized a new concept in heating and air conditioning by making all walls demountable and leaving open space both under and over each wall. School officials have not been happy with the problems of sound transmission between rooms. It appears that much of the problem could be eliminated by use of carpeting on classroom and hall floors.

The School Planning Laboratory of Knoxville, Tennessee, acted as consultants to coordinate the planning of administration, staff and specialists as they worked to develop a complete program and a new facility for the Clarksville-Montgomery County High School in Clarksville, Tennessee. Cost is always a factor which must be considered when public schools are being planned. At Clarksville many new innovations were provided for by a conservative approach to the overall planning. The building is made up of three doughnut-shaped pods that encircle the administrative complex and the teachers' work spaces. Less outside wall construction and fewer corridors are needed in circular construction; this savings has made money available for other provisions.

Two of the three 16,000 square foot classroom clusters have no interior walls. The absence of permanent walls between classrooms permits a high degree of flexibility. The open wall concept gives teachers freedom otherwise impossible. Visual barriers are provided between areas by using portable equipment. Sound is controlled by carpeted floors, by acoustically treated surfaces, and through the use of electronic cables that set up fields of restricted noise. This is accomplished by the use of a magnetic induction system which incorporates a wire loop woven into the carpeting or placed under it. This system limits extraneous noise from other areas by electronically holding the noise within the area.

The Nova School in Fort Lauderdale, Florida, was two and one-half years in the planning stage. It too is a Ford Foundation project and will, when completed, be a model of education from pre-kindergarten through university level.

The high school is very unique in that it is built to promote more individualized work and small group participation. Private offices for teachers with many small conference areas readily available and accessible are located throughout.

Their retrevial center is centrally located and well equipped. It is furnished electronic access from carrels and teachers' stations throughout the complex.

During seven months of planning the writer has traveled 27,000 miles and visited over 100 programs, and facilities in 11 different states. This is believed to be extensive enough to determine a trend in what is being done successfully in the more progressive states. The Trump Plan in a Shaver building will not solve all the problems in education today, but it will unloose some of the cords that have bound traditional lock-step programs down through the years.

CHAPTER V

EDUCATIONAL SPECIFICATIONS - SALEM MODEL SCHOOL
SALEM, ARKANSAS

The project director brought back to curriculum planning sessions ideas and information gained from exemplary programs visited during the early months of the project.

Local teachers participated in setting up a basic curriculum of 100 subjects. Consultants from the University of Arkansas, two State colleges, the State Department of Education, and several out of state specialists have evaluated and offered suggestions that have resulted in alterations of some subjects, additions and deletions of others.

Consultants have been helpful in pointing out the possibilities that lie ahead for programs that are planned with provisions for individualizing instruction.

Guidance has been rendered on such paramount issues as the organizing of curriculum, teaching techniques to be employed, ungrading the school, planning each individual area of the building, and selecting of the site and architect.

The results of these planning conferences are detailed in the subsequent pages of this chapter. Included is a letter addressed to the administration, school board, and staff which accompanied the results of the author's study.

August 15, 1966
Salem, Arkansas

The Administration, School Board and Staff
Salem, Arkansas

Gentlemen:

The portrayal of a general campus master plan, with accompaning general considerations and guidelines, is intended only as a device to express a planning approach to meet the educational program needs of the proposed ungraded high school for the Salem Model School area. Sections of this report are intended to be suggestive rather than final and are to serve the staff, administration, and architects as a point of departure rather than an unchangeable dictum.

Wtih this in mind, the project director is submitting this educational specification as a picture of the composit thinking of many consultants who have contributed. Your review and approval is necessary prior to the drawing of preliminary plans.

I will appreciate your comments and suggested revisions, which are vital and important, if this document is to truly represent the philosophy and goals of the Salem Model School.

Professionally yours,

John L Vandiver

John L. Vandiver
Project Director

SALEM MODEL SCHOOL

Salem, Arkansas

BOARD OF DIRECTORS

Russel Estes, President
Dr. C. B. Arnold, Secretary
Russell Langston
Horace Huett
Ford Benton

ARCHITECTS

Shaver and Company

SUPERINTENDENT OF SCHOOLS

A. R. Stroud

PROJECT DIRECTOR

John L. Vandiver

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PREFACE

Planning a total school program is closely akin to directing a movie in the Alford Hitchcock fashion. Mr. Hitchcock, interviewed by Hugh Downs on the TODAY SHOW July 6, 1966, related at that time how he is able to visualize his completed product before it is ever filmed. To this phenomenon he attributes his success as a director. This same insight and broad perspective is extremely necessary to the educational planner who must be able to visualize children in a learning situation prior to laying a brick or planning the curriculum.

In this dissertation every effort has been made to visualize young people, vibrant, inquisitive, and involved in learning for a purpose. Young minds are active and do not remain motionless long at any time. The educator's key to success is to involve the restlessness of the young learner in interesting activities which will lead to the culmination of desired goals.

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Oren Haney, County Judge
Bob Weathers, Mayor

EDUCATIONAL PHILOSOPHY
~~SALEM MODEL SCHOOL~~ Russellville High School

Statement of Philosophy

This school will influence the lives of ~~children~~ Young People and adults in every way possible, enriching the lives of its students in all phases of community activities.

It will be the basic aim of this school to teach useful fundamental concepts, to develop the skills of application, and to foster appreciation for America's heritage including the aesthetics.

This program must be developed with full intent to meet the needs of both the terminal and college bound student. In order to accomplish these diverse aims, the curriculum, program, and facilities must be flexible, allowing the school to be molded to fit the student and his needs. The ~~Salem Model~~ Russellville High School must literally take each student where he is and challenge him to his greatest possible potential.

Based upon the premise that each person learns not only at his own rate but also under peculiar circumstances it will be the philosophy of the ~~Salem Model~~ Russellville School to personalize and individualize every educational service offered.

Objectives

This school will:

1. Emphasize the teaching of language arts, math, science and social science, by offering each student the

opportunity to participate at an interval commensurate with his achievement level.

2. Provide instruction in the aesthetics, preparing students to participate and enjoy the arts.

3. Provide general introductory educational training in a broad range of technical fields.

4. Serve as the educational hub of the school community and provide for evening, Saturday, and summer classes at all educational levels from ~~elementary~~ through advanced placement.

5. Provide for experimentation and research opportunities and encourage students in their quest for knowledge of and about the unknown.

6. Remain in continuous operation specifically dedicated to a nongraded approach that will permit each student, dependening upon his interest, aptitudes, and capability, to gain optimum success.

7. Provide opportunities for adult training and re-training to meet the needs of ~~this~~ ~~rural America.~~ ~~community.~~ all citizens in this Community.

8. Provide basic adult education to raise the educational level of the adult population and afford the opportunity for aesthetic enrichment and growth.

THE PROBLEM

The problem involves planning for a new educational facility to ultimately house ~~1,000~~ 12,00 or more students in grade levels ~~9~~ 10 through 12, with additional utilization of the plant to include such activities as night school, adult education, summer school, and general community social and recreational use. This facility is to be built in an area of the ~~county~~ ~~city~~ District which is geographically ~~the center~~ advantageous and which is growing steadily, but has not reached its full population. Thus, the entire school plant is not required immediately and must be planned for two, or at most three, building stages. Classroom areas will be initially designed to accommodate ~~635~~ 800 students. Those areas of the school which cannot be easily expanded in the future must be built for the ultimate capacity enrollment and may serve dual purposes for a period of time. Through each building stage, the school must function with minimum inconvenience to both students and staff.

In the past decade we have seen more change in educational programs and facilities than we have had in the history of this country. Change is the keynote of the times, and the next few years ahead will undoubtedly bring even greater changes as modern technology infiltrates instructional methodology.

Spaces of different size are required to accommodate differing-sized groups ranging from one individual student to groups of 250 or more. At the same time it is imperative that some spaces be developed to provide instantaneous flexibility through the use of operable walls or space dividers to accommodate change of grouping during or between class periods. In order that future space arrangements and changes can occur within the limits of the present space allocations, it will be necessary to provide flexibility of the type which will permit the rearrangement of space during a relative short period of time, such as may be obtained through the use of demountable partitions.

Equipment, particularly in the areas of science and technical vocational education, often becomes obsolete in the period of a very few years. Thus, up-to-date educational programs will require occasional equipment changes. Therefore, it is necessary that utilities and services be designed to permit ease of accessibility and enough flexibility to readily permit change and rearrangement of equipment from time to time.

In summary, the ~~Salem Model School plant~~ Russellville High School should ~~offer~~ have one major purpose which is the opportunity for development of a sound educational program. The building must be designed and constructed so that all aspects of the program can be geared to changing educational methods, free from restrictions imposed by unyielding physical barriers. Facility design must stem from knowledge of what and how students learn, and in what manner they will be taught. Thus, planning must, and it has, start with a determination and description of the desired educational program, then proceed to a determination of the facilities needed to house this program.

Continue here

Introduction

INTRODUCTION i. Basic Information

The purpose of this educational specification is not to determine policy or to make facility space commitments for the proposed ~~Salem Model~~ Russellville School. Rather, it is to provide planning guidelines from which the administration and staff can develop their own policies and decisions. An objective analysis of all available data is necessary if the desired goals are to be achieved.

This written program describes briefly and clearly the activities to be housed, the people involved, spatial relationships of the school plant to site, inter-relationships of one instructional area to another and to non-instructional spaces, and any special provisions which deal primarily with environmental conditions of the school plant.

This document defines and records the space requirements for all functions of the high school program and the accommodations and relationships desired for and between each instructional and auxiliary area. It is prepared to assist the architectural development of preliminary drawings. Details concerning type, size, and specific location of furniture; equipment and special utilities are excluded from this report and will be compiled under separate cover for use during the schematic and working drawing stages.

~~BASIC INFORMATION~~

The team approach ~~has been~~ will be used as the basis for the development of these educational specifications. Contributions ~~have~~ must come from the administration and staff of the ~~Salem~~ Russellville School~~s~~, the school board, the departments of curriculum and school administration of the University of Arkansas, curriculum specialist and building specialist of the Arkansas State Department of Education, and the architect~~, and project director.~~ ~~Superintendent of Schools.~~ Organization and compilation ~~has been~~ will be done by the ~~project director~~ Superintendent.

These educational specifications are intended to serve as a guide to the architect by designating the educational activities to be housed and the approximate space needed to facilitate the program. Suggestions regarding area, location, and physical characteristics are not intended to be absolute. Problems are expected to arise as the architect develops the preliminary drawings; these problems can be resolved by the same cooperative action used in prescribing ~~these~~ the original specifications.

A concerted effort has been made to define the problems involved in making this a truly model facility, to prepare for flexibility which appears to be the most desired trend in new school buildings, and to provide a stimulus that will insure continued cooperative curriculum improvement.

The citizenry to be served by these buildings are believed to be typical of that found in most other rural Arkansas attendance areas. It is necessary for these facilities to house a program with the following basic aims:

1. The foremost objective of this school is to prepare its citizenry with the skill of adaptation. The technological age in which we must educate youngsters for professions and occupations which are yet unknown and cannot be described compels public school programs to set the example of flexibility and use its energy to prepare individuals to be adaptable.

2. Training must provide a saleable skill for some who will not attend college but will enter the labor market immediately after graduation.

3. Experiences must provide the background necessary for college bound students to compete with graduates from any other high school in the nation.

4. Provisions must be made for adults to continue or complete high school education and training in saleable skills.

5. This model school must serve as a community center of educational progress by making areas such as the educational materials center available for use both day and evening and on a yearly basis.

THE PROGRAM

Description of the educational program involves analysis of the expected educational outcomes; discernible current and future trends in content; present and future class enrollments; methods and materials; specific teaching and non-teaching activities; inter-relationships of spaces; internal and external student traffic patterns; kinds, sizes, and amounts of furniture and equipment; utility services; visual, thermal, and acoustical needs; kinds, sizes, and numbers of storage areas; and unique requirements. This description of educational program provides the basis from which design and specification decisions may be rendered by the architect.

Since learning occurs as an individual process, the fundamental objective of this project is to create an environment which will enhance this process. As a direct correlate of independence in learning, it is apparent that when the responsibility for scholarship is placed upon the student rather than upon the teacher, the stage is set for education in its true sense. With focus on the individual student, it is essential to recognize and provide for individual rates of learning and accomplishments. In this light, it is increasingly important to challenge the traditional concept of a fixed time module of the same duration for each subject area. While the learning phenomenon takes place only within each individual, it should be remembered that this discovery can occur during a lecture involving hundreds of students or during a discussion with only two or three students.

It is of paramount importance that the educational program of this model school immediately reflect the highest level of performance possible; but also it must be of such scope as to promote impressive strides into the future. Although the reference to subject areas in the following sections refer to general organization and may semantically reflect traditional programing, a more imaginative and meaningful curriculum organization and developement will take place within this framework. Sequential multiphasing will dictate a nongraded organization that can best perform as flexible teams of teachers and aids.

No person, or group of persons, can predict with certainty the exact nature of the secondary school program of the future. There are, however, certain discernible forces at work in reshaping the educational program. The major ones of these and their consequent building implications are identified for planning purposes.

Staff Utilization

The newer forms of instuctional methodology include provisions for the effective utilization of staff and application of flexible educational techniques. Teaching teams will utilize aids, student teachers, and teaching interns to assist with both professional and non-professional tasks which have formerly been done by only certified personnel.

Variable Grouping

A wide variety of grouping patterns will be used to fit specific kinds of learning situations. The range includes the student body 800-1200, ~~(635)~~, large groups (65 - 200), medium groups (25 - 60), regular classes (15 - 20), small groups (5 - 10), and individual study (1). Variable grouping is based on the premise that not every phase of every subject can be taught best in uniform classroom groups and not all students learn all things best in such groups. Schools which have experimented with variable grouping such as the Ridgewood School in Norridge, Illinois, and the Melbourne School in Melbourne, Florida, have found that introductory materials, films, demonstrations, lectures from outside consultants, and much general background information can be presented most effectively by talented teachers in a large group situation. They have also proven that discussions, more personalized student teacher contact, and more individually tailored instruction can be handled better in smaller seminar groups or by individual study.

Flexible Scheduling

Flexible scheduling based on multiples of smaller modules of time or alternating sections of a class on alternate days of the week will be developed to cope with the problem of equivalency of subjects, diversity in learning outcomes, individual differences among pupils, and the need for greater continuity in the study of some subjects. This variation in length and number of periods will create different movements and traffic patterns throughout the school plant.

Communication Media

The ~~Salem Model~~ Russellville High School will make available to its teachers and students all the known avenues to knowledge, appreciation, and understanding. Electronic laboratories, open and closed circuit television, video-tape, overhead and to-the-rear projection, teaching machines, radio, disc and tape recordings, tele-lecture, films and film strips, and many other varieties of materials are available and will be furnished to supplement the teaching learning process. A communication center will be developed which will coordinate and synchronize the use of all these media.

Appropriate Sequential Placement

The ~~Salem Model~~ Russellville School will operate as an ungraded high school. The graded concept will be replaced by a sequentially phased curriculum. Students will be appropriately placed on a level commensurate with the students' achievement level. Courses will be offered by depth as follows:

> PHASE I: Subjects will be centered around remedial work and be designed for students with problems in the communicative skills and basic mathematical concepts.
>
> PHASE II: Subjects will be for those with average reading ability who need to concentrate on basic skills of application and understanding. These subjects will be designed for those who perform at an average level in most or all areas. Students must be able to read at or near grade level and have mastered the basic skills of the grade level.

PHASE III: Subjects will be available for students desiring education in considerable depth. This level will require more independent study, self direction, and performance beyond teacher assigned directions.

PHASE IV: The quest sequence. These subjects will be open only to students who are willing to assume responsibility for content and direction. The materials will be library centered and programmed. Research and experimentation will keynote this level of performance, and teachers will be by appointment only.

Ungraded subjects which do not lend themselves to sequential divisions but which will meet the students needs on an individual basis within the class organization are physical education, typing, manual arts and crafts, and possibly vocational home economics and agriculture.

All subjects will be open to all students at any time; furthermore, the philosophy of this model school will permit any student to pursue any course of study which he feels capable of mastering without regard to grade level or sequence.

In addition to the above listed forces shaping this educational program, increased use of the school plant for adult education programs, for community recreational centers, and for year around educational activities will merit planning consideration.

Development of Curriculum

~~The~~ Careful planning ~~grant approved by the Department of Elementary and Secondary Education stipulated that the Salem Model School would be built~~ will make it possible to meet the ~~present~~ immediate needs of ~~635~~ 800 students in grades ~~9~~ 10 through 12 and ~~that it would~~ will make it possible to establish an adult educational program to meet the needs of an adult citizenry with an educational level below the national norm.

According to recent trends in the dropout rate of high school students and based upon the premise that this model program will retard the rate of dropouts in this ~~area of the state~~ district, the following table shows the estimated enrollment for each classification at the time it will open in September, 1970.

~~Freshmen~~	~~approximately~~	~~26%~~	~~of~~	~~enrollment~~	~~162~~
Sophmores	approximately	~~25%~~ 35	of	enrollment	~~160~~ 280
Juniors	approximately	~~25%~~ 33	of	enrollment	~~158~~ 264
Seniors	approximately	~~24%~~ 32	of	enrollment	~~155~~ 256
	TOTAL	100%			~~635~~ 800

To meet the needs as reflected by a study of the social, economic, and financial background of this area, the curriculum ~~is~~ should be organized to function as "five schools" within a school. They are as follows:

1. The school of language arts and social studies
2. The school of math and science
3. The school of vocation
4. The school of fine arts
5. The school of physical education

Educational specifications and architectual planning ~~will~~ should be developed around this concept and ~~will~~ should allow for flexible utilization of every facility within each of the five schools.

The following tables show in detail the subject offerings that will be available to the ~~model~~ high school students.

COURSE OFFERINGS

LANGUAGE ARTS:

COURSE	SEQ. NO.	DESCRIPTION	PHASE	EST. NO.	CLASS SECT.	TEACHERS
English	101	Remedial language laboratory	I	100	8	
English	102	Basic communication skills for average ability and achievement	II	335	16	
English	103	In depth, research, ind. study	III	75	5	
English	104	Research and speed reading	IV	25	2	Appt.
Reading	102	Developmental program for students with reading problems. Coordinate with English 102.	II	50	3	Appt.
Speech	102	Team with dramatics	II	30	2	
Debate	103	Team with agriculture debate	III	30	2	
Journalism	102	Team with director of publications	II	30	2	
UNITS OFFERED	8		TOTAL	705	40	TEAM OF 8

4 years required attendance, majors will elect 5th or 6th credit.

COURSE OFFERINGS

FOREIGN LANGUAGE:

COURSE	SEQ. NO.	DESCRIPTION	PHASE	EST. NO.	CLASS SECT.	TEACHERS
French I	102	Introductory	II	25	2	
French II	103	For Majors	III	20	1	
French III	104	Independent Study	IV	15	1	Appt.
French IV	104	Independent Study	IV	10	1	Appt.
Spanish I	102	Introductory	II	30	2	
Spanish II	103	For Majors	III	25	1	
Spanish III	103	Independent Study	III	20	1	Appt.
Spanish IV	104	Independent Study	IV	10	1	Appt.
UNITS OFFERED	8+		TOTAL	155	10	TEAM OF 2

On request any language will be offered if programed materials are available.

COURSE OFFERINGS

SOCIAL STUDIES:

COURSE	SEQ. NO.	DESCRIPTION	PHASE	EST. NO.	CLASS SECT.	TEACHERS
Amer. Hist.	101-a	Emphasis on period to 1865	I	30	2	
Amer. Hist.	101-b	Emphasis on period since 1865	I	30	2	
History	102	General survey of Amer. History	II	70	3	
Amer. Hist.	103	Topical or interest approach-research	III	40	2	
Amer. Hist.	104	Ind. study by appointment	IV	6	1	Appt.
History	102	World History - General	II	50	2	
Geography	102	World Geography	II	25	2	
Government	103	U.S. & World Affairs	III	25	1	
Civics	101	Local, County, State, Civics-Gov't.	I	15	1	
Civics	102	Local, County, State, Civics-Gov't.	II	30	2	
Economics	102	Emphasis on current conditions	II	30	2	
Humanities	103	Team with art and music dept.	III	15	1	
Sociology	102	General Sociology	II	20	1	
Psychology	103	General Psychology	III	20	1	
UNITS OFFERED	14		TOTAL	406	22	TEAM OF 5

2 units required for graduation (1 unit must be American History).

COURSE OFFERINGS

SCIENCE

COURSE COURSE	SEQ. NO.	DESCRIPTION	PHASE	EST. NO.	CLASS SECT.	TEACHERS
Earth Science	101	General introductory course for those students who have had general science in 7th and 8th years.	I	40	2	
Science	101	Time, space and matter	I	25	2	
Science	102	Applied Physical	II	40	2	
Biology	102	Using B.S.C.S. materials	II	40	2	
Biology	103	For students who will major in science and related fields	III	60	3	
Biology	104	Research & Experimentation	IV	25	1	Appt.
Chemistry	102	Using Chem Study approach	II	20	1	
Chemistry	103		III	15	1	
Chemistry	104	Ind. study and research	IV	10	1	Appt.
Hum. Anatomy Physiology	104	Advanced study, recommended for biology majors or pre-med.	IV	20	1	Appt.
Physics I	103	P.S.S.C. Materials	III	20	1	
Physics II	104	Advanced individual study	IV	10	1	Appt.
UNITS OFFERED	12		TOTAL	325	18	TEAM OF 4

2 units required for graduation

COURSE OFFERINGS

MATH:

COURSE	SEQ. NO.	DESCRIPTION	PHASE	EST. NO.	CLASS SECT.	TEACHERS
Gen. Math	101	Quiseniare Rods Math Remedial & basic fundamentals	I	15	1	
Consumer Math	102	Review of basic fundamentals and application to use as a consumer	II	40	2	
Algebra I	102	Basic and advance slowly	II	50	3	
Algebra I	103	Review basic, more depth	III	55	2	
Algebra II	103	Advanced	III	30	2	
Plain Geometry	103	For those needing background to major in math	III	30	2	
Bus. Arith.	102	Team with the business dept.	II	30	1	
	104	Trigonometry & advanced math	IV	15	1	Appt.
	104	Analytics and calculus	IV	10	1	Appt.
Statistics	104	By appointment - programed	IV	6	1	Appt.
UNITS OFFERED	10+		TOTAL	281	16	TEAM OF 3

2 units required for graduation
On request any math with programmed materials available.

COURSE OFFERINGS

FINE ARTS:

COURSE	SEQ. NO.	DESCRIPTION	PHASE	EST. NO.	CLASS SECT.	TEACHERS
~~Band~~	~~101~~	~~For Beginners~~	~~I~~	~~25~~	~~1~~	
Band	202	Intermediate	II	~~30~~ 60	~~2~~ 2	
Band	302	Advanced	II	~~50~~ 100	~~2~~ 3	
Music	101	Public School Music & Appreciation	I	75	3	
Music	102	Choir and Chorus - Mixed	II	~~30~~ 75	2	
Music	104	Choir & Chorus - By Appointment	IV	~~10~~ 15	1	Appt.
Drama	103	Dramatics (team with speech)	III	~~10~~ 15	1	
Art	101	Basic, Beginning Art	I	~~165~~ 100	2	
Art	102	Basic, Fundamentals	II	30	1	
Art	104	Independent Study	IV	10	1	
UNITS OFFERED	10		TOTAL	435	14	TEAM OF 3

1 unit in fine arts field required for graduation, ½ unit must be basic art.

COURSE OFFERINGS

VOCATIONAL EDUCATION:

COURSE	SEQ. NO.	DESCRIPTION	PHASE	EST. NO.	CLASS SECT.	TEACHERS
Home Ec. 1	10X	Vocational Home Economics	X	~~45~~ 65	3	
Home Ec. II	20X	Vocational Home Economics	X	~~45~~ 65	3	
Home Ec. III	30X	Vocational Home Economics	X	~~40~~ 45	2	
Home Ec.	404	Independent Study	IV	30	2	
	404-a	Interior Decorating				
	404-b	Home Management				
	404-c	Clothing				
	404-d	Foods				
	404-e	Home Nursing				
	404-f	Personal Culture				
	404-g	Child Development				
Home Living	102	Recommended as a senior course for boys and girls	II	40	2	
UNITS OFFERED	7+		TOTAL	200	12	TEAM OF 2

1 unit of Home Economics required for girls.

COURSE OFFERINGS

BUSINESS EDUCATION

COURSE	SEQ. NO.	DESCRIPTIN	PHASE	EST. NO.	CLASS SECT.	TEACHERS
Gen. Business	102	Business, Math and Law	II	40	2	
Typing I	10X	Basic manual skills, some appli.	X	80	2	
Typing II	20X	Review basic skills, emphasis on application	X	50	1	
Typing	30X	Personal Typewritting	X	15	1	
Shorthand	102		II	30	2	
Shorthand	103		III	20	1	
Office Prac.	102	Office practice & Business English	II	30	1	
Bookkeeping	102		II	30	2	
Bookkeeping	103		III	20	1	
Economics	102	Consumer Economics (team with social studies)	II	30	1	
Machines	102	Business Machines	II	20	1	
UNITS OFFERED	11		TOTAL	365	15	TEAM OF 3

1 unit or 45 words per minute competency in typewritting required for graduation

COURSE OFFERINGS

VOCATIONAL EDUCATION:

COURSE	SEQ. NO.	DESCRIPTION	PHASE	EST. NO.	CLASS SECT.	TEACHERS
Agri. I	10X	Vocational Agriculture	X	45	3	
Agri. II	20X	Vocational Agriculture	X	40	3	
Agri. III	30X	Vocational Agriculture	X	35	2	
Agriculture	404	Independent Study	IV	25	2	
	404-a	Farm Mechanics				
	404-b	Welding				
	404-c	Small Gas Engines				
	404-d	Supervision and Management				
	404-e	Other Farm Related Occupations				
UNITS OFFERED	6+		TOTAL	145	10	TEAM OF 2

* ALL 404 Courses to team with the Classes taught in Vocational Technical Courses

COURSE OFFERINGS

PRACTICAL ARTS & CRAFTS:

COURSE	SEQ. NO.	DESCRIPTION	PHASE	EST. NO.	CLASS SECT.	TEACHERS
Drawing	102	Drawings relating to Architecture	II	15	1	
Drawing 20	202	Technical Drafting & Design	II	15	1	
Crafts	10X	Projects according to interest and demand	X	30	2	
Arts	101	Industrial Arts & General Shop	I	30	2	
Arts	102	Industrial Arts - Projects	II	18	1	
Mechanics	10X	Auto Mechanics & Small Motors	X	15	1	
Mechanics	20X	Auto Mechanics & Small Motors	X	15	1	
Trades	10X	Building Trades	X	12	1	
*Education	10X	Drivers Education	X	10	2	Summer
UNITS OFFERED Electives	10		TOTAL	172	13	TEAM OF 4

*Due to increased emphasis on the importance of safety, this course required of all graduates.

COURSE OFFERINGS

PHYSICAL EDUCATION:

COURSE	SEQ. NO.	DESCRIPTION	PHASE	EST. NO.	CLASS SECT.	TEACHERS
P.E.	10X	Boys Physical Education	X	80	2	
P.E.	20X	Boys Physical Education	X	70	2	
P.E.	30X	Boys Physical Education	X	50	1	
P.E.	40X	Boys Physical Education	X	35	1	
UNITS OFFERED	4		TOTAL	235	6	TEAM OF 2
P.E.	10X	Girls Physical Education	X	80	2	
P.E.	20X	Girls Physical Education	X	70	2	
P.E.	30X	Girls Physical Education	X	40	1	
P.E.	40X	Girls Physical Education	X	25	1	
UNITS OFFERED	4		TOTAL	215	6	TEAM OF 2

2 units (2 full years of participation) required for graduation.

Facility Implications

In view of the foregoing trends, innovations, and basic premises, the following statements of educational philosophy and the resulting architectural implications seem relevant:

1. The emerging philosophy of education deals with each child individually and recognizes the difference among children of the same age. Therefore, the school must feature multi-age groupings, special emphasis upon the individual, and flexibility in the instructional program, activities, and school plant. It must be possible to rearrange spaces to facilitate both the refinement of present programs and the development of future programs.

2. The public schools are experiencing a period of rapid and significant development. Vast changes are being made in goals, in patterns of instruction, in the organization of staff and program, and in the use of educational resources. Therefore, model facilities now being planned must lend themselves to changes not yet predictable. To accommodate an evolving educational program, the physical plant should provide for the maximum flexibility possible. Design concepts should provide specific use spaces consistent with the educational program, as well as multi-functional units of space which can be adjusted to specific requirements of the instructional program. Spaces must be provided with movable partitions which will allow instantaneous change to varying sizes throughout the school day or week.

3. The central purpose of education is to develop a self-educating individual. Therefore, the Salem Model School must provide opportunities, spaces, and resources for independent study, and the relationship of the individual student to his learning environment should be such as to encourage and promote individual responsibility.

4. Both students and teachers profit from the extensive utilization of staff. Therefore, the school must provide staff facilities and flexible space for staff to work together, to prepare lessons, to construct instructional materials, to counsel students, and to discuss formally or informally instructional problems.

5. Accessibility of adequate resource materials is vital to an effective teaching-learning process for both teacher and pupil. Therefore, the school will have as its central focus a resource materials center containing all educational media, and space provisions for individual and group use of the media.
6. Staff utilization, administrative supervision and control, instructional grouping, and curriculum development can best be achieved through instructional units organized around subject areas. Therefore, special emphasis should be devoted to the specific teaching-learning environment of such departmental units. Each unit should have the capability of housing varying sized groups.

Educational Space Requirements

The Salem Model High School is planned for an ultimate enrollment of 1,000 or more students, and it is assumed that the school population will be similar to that of the present area schools now in operation; that is, pupils will have a range of backgrounds, interests, and aptitudes.

Based on present experience, we can assume that a moderate number of the high school graduates will matriculate in college. Because the model school will have responsibility for its graduates who are terminal as well as those students who complete their college education, the school must be comprehensive in nature; that is, it must provide an education suitable to the student that will be entering the world of work without going to college and, at the same time, provide the academic background necessary for the pre-college pupil.

In order to determine the number, kind, and size of the educational spaces which will be required to house the educational program of the proposed model school, the following procedures were employed:

a. The number of students that could normally be expected to enroll in each of the elective and required courses was predicted. This prediction was based on previous experience in the existing high schools of the area.

b. The information thus obtained was translated into the number of periods required for each subject.

c. Based on the number of periods needed for each subject area, the number of teaching stations was determined.

d. Two tables were prepared to show teaching spaces needed for a student enrollment of 635. The space requirements, detailed in the following sections of this report, reflect space requirement to accommodate 635 students.

Data gained from these procedures are summarized in the following tables:

COMPUTATION OF TEACHING STATIONS
(635 students) (according to fields of study)

SCHOOL OF:	NO. OF PUPILS ENROLLED	AVERAGE NO. OF PUPILS PER CLASS	NO. OF CLASS SECTIONS	CLASSROOM OR STATION	NO. OF TEACHERS
Language Arts and Social Studies	1266	18	72	13	15
Math and Science	606	18	34	7	7
Vocations	882	18	50	12	11
Fine Arts	435	31	14	3	3
Physical Education	450	38	12	2	4
TOTAL	3619	20	181	37	40

COMPUTATION OF TEACHING STATIONS
(635 students) (according to fields of study)

SUBJECT	NO. OF PUPILS ENROLLED	AVERAGE NO. OF PUPILS PER CLASS	(1) NO. OF CLASS SECTIONS	(2) CLASSROOM OR STATION	(3) NO. OF TEACHERS
Arts and Crafts	172	13	13	4	4
Business	365	24	15	4	3
English	705	18	40	7	8
Foreign Language	155	16	10	2	2
Homemaking	200	16	12	2	2
Mathematics	281	17	16	4	3
Fine Arts	435	31	14	3	3
Physical Education	450	37	12	2	4
Science	325	18	18	3	4
Social Studies	406	18	22	4	5
Agriculture	145	15	10	2	2
TOTAL	3619	20	181	37	40

(1) Number of class sections based on a six-period day.
(2) Number of stations computed at 80% utilization.
(3) Number of teachers based on a five-period-day teaching load.

THE EDUCATIONAL ENVIRONMENT

The physical facilities of any educational institution are of major importance in realizing the objectives of the entire school's program. Physical facilities for a high school, in addition to being a determining factor in achieving the goals of the instructional program, are vital to establishing an atmosphere of freindly informality between students and faculty. The necessity for a proper educational environment to reach the school's objective should be kept in mind during the planning of all phases of this proposed model school.

High school students in the Salem area have widely ranging abilities and interests. The desired educational environment of the high school is a basic factor that should be kept in mind by educators, architects and civic groups in planning any specific space within these facilities. It is the purpose of well-designed facilities to help both student and community to gain self-realization.

The facilities of this school should be so unified in their arrangement that they break the barriers between technical and non-technical students. This unity also provides a built-in integration so that students from different phases meet and benefit from each others contribution. The design of this facility must influence the individual as much as books and teachers to which he is exposed. The proper relation between good architecture, sculpture, landscaping and consciously ordered environment will carry over into later life. Buildings, regardless of use, should be beautiful and utilitarian and, together with properly related supplementary works of art, should provide the atmosphere and environment which are desirable and necessary to the proper growth of deprived rural youth.

In this model school plant, the teaching-learning spaces may be categorized as general academic, special instructional, or auxiliary facility areas. The general academic spaces are suitable for instruction in a variety of subject matter fields such as social studies, English, or mathematics. In contrast, special instructional areas--such as those for science, arts, homemaking, or industrial arts--are designed, constructed, and equipped for a particular segment of the educational program and its consequent activity. Auxiliary areas supplement a variety of instructional spaces.

Since the general academic areas enroll the bulk of the student body at any one time, the need for this type of facility varies more directly with changes in enrollment than does the need for a particular special facility which may enroll, in the course of the school day, only a small proportion of the total school population.

General Classroom Instructional Areas

The completed school plant should contain or provide for enclosed teaching spaces and auxiliary areas to facilitate the teaching-learning process, together with adjunct outdoor areas. In general, instruction will be organized within four group sizes: large group instruction (over 65 students), intermediate or conventional class instruction (15 to 30), small group discussion (5 to 10), and individual study.

Large group instruction will include a number of activities carried out in groups of 65 or more students. Instruction and discussions will be conducted by teachers who are particularly competent, who have more adequate time to prepare, and who will utilize the best possible instructional aids. Large group activities may occupy a portion of the student's time. However, the amount of time spent in large groups will change according to subject and grade level at different stages within a subject and in accordance with student interest and maturity. Examples of activities that might take place in these large groups would include illustrated lectures, special demonstrations, testing, presentations by guest speakers, televised lessons, and motion pictures.

Large group instruction should take place in spaces designed specifically for this purpose. These areas should be central to the subject areas served, but may vary in size according to the needs of the various centers. Each large group instruction area should be provided with comfortable tablet-arm chairs or pedestal chair with writing table, and should be arranged to provide sufficient spaces for passage between rows while students are writing. Each student should have proper visual and auditory access to the teaching and demonstration station.

Intermediate group instruction will include many learning activities and functions which are unsuited to large group instruction. This grouping encompasses the conventional classroom activities and may also be used to complement the instruction which has taken place in large groups. This form of instruction will permit the continuance of conventional classroom organization until such time as an orderly development toward other forms of instruction may take place.

Small group instruction will involve five to ten students and a teacher engaged in depth exploration of concepts through the guided interaction of students' own thinking. Examples of the activities that might take place in small groups would include analytical and/or exploratory discussions, conferences, reporting, testing clarity of understanding, and panel discussion.

Individual study will engage students' time in study activities as individuals or in groups of two or three with a minimum of supervision. These activities will take place in study carrels, project and materials centers, museums, workshops, libraries, and laboratories--in and outside the school. Individual study activities will require that students progressively take more responsibility for self-direction. The amount of time will vary according to subject, sequence level, and student maturity.

General purpose classrooms will consist of variable-size spaces or classrooms to accommodate large group instruction, medium group instruction, small group discussion, and individual study. Considerable flexibility may be accomplished within this area by the use of movable and/or demountable partitions. The general requirements for all of these classrooms, within a particular group or kind of activity, are approximately the same. For this reason, the requirements for all general purpose classroom spaces will be discussed in this section. Special modifications of these general requirements will be treated under the specific subject area concerned.

Specific Considerations for Instructional Areas

The selection and location of the controls for the communication equipment should be in accord with the premise that the teacher should be in complete command of the students' attention at all times. Controls for operating each piece of audio-visual equipment in the teaching space, therefore, should be located near the teaching station.

Specifically, the teacher station area should provide the following: controls for lighting and the operation of audio-visual equipment; an overhead and/or opaque projector, an appropriate viewing screen of adequate size, a teacher's chair, and a small table with lectern. In addition, it should be possible to use a portable demonstration unit which could be moved into position at the will of the teacher.

The activities involved in small group discussion and individual study work complement each other and for reasons of flexibility and economy can be housed in a common facility. Furthermore, it is suggested that two or more small group study spaces could be opened into a space which would accommodate intermediate group or conventional classroom activities. Such flexibility and utility might be accomplished within a space containing approximately 750 square feet, divisible by sliding or rolling site dividers. This common space, hereafter referred to as a divisible classroom, should be equipped according to the group activity for which it is designed.

The use of divisible classrooms can provide adequate flexibility for the development of the educational program in the district, since it is probable that most general-academic subject-matter areas will utilize some conventional classroom spaces for some time to come. However, as the anticipated program develops toward more and more large group, small group, individual study activities, the conventional spaces can easily be converted to use as divisible modules, if so planned. Furthermore, a series of the divisible classrooms will enable a teacher, or team of teachers, to develop, coordinate, and supervise a program of large group, small group, or individual study activities as dictated by the needs of the particular group of students.

A departmental office area is advisable. It is no longer considered feasible for a teacher to continue to use a single classroom space all day. Therefore, it is imperative that the instructional spaces within each subject matter area be centered around a departmental office which provides each teacher with relatively private preparation and office space. In addition, the departmental office will serve as a general storage area for certain audio-visual and instructional supplies, as a work room for the departmental staff, and as a conference area for small staff and student groups.

The size of each departmental office will depend upon the number of instructors to be housed. Over-all space allocations will be ample if eighty square feet per instructor is allowed. In addition, space should be allowed in each departmental office, or combination of offices, to accommodate teacher aids and clerks.

The departmental office should, in general, be an open area with semi-privacy provided by the use of planters and room dividers and by the arrangement of furniture and equipment. It is suggested that most teacher areas be arranged in groups of three or four to facilitate team teaching, preparation and planning. The departmental office should be easily accessible from all instructional spaces within the subject area and should have outside corridor access. Specific arrangements for each department will be discussed within the section dealing with each instructional center.

A careful evaluation of space economy must be made in these model plans. Economy would indicate that, wherever possible multiple use of a given space should be made. Efficient multiple use, however, will depend on the design of the facility and its location. Multiple use should not be forced at the expense of the educational program because, in some circumstances, multi-use space turns out to be unsatisfactory for any of the activities it is intended to house, thus becoming wasted space. Where this is likely to occur, true economy dictates that separate facilities be provided. The major multiple use areas considered in this report would include the large, medium, small group, individual instruction and study spaces, the resource materials center, and the student activities areas.

Display areas and trophy cases have been utilized by the elementary schools and athletic departments to promote interest and enthusiasm among students. Other disciplines should be encouraged to promote the same practices. Space for the display of all types of art work, posters, exhibits, experimentation, and research should be located at conspicuous well-traveled positions throughout the school plant. Careful designing will prevent unused spaces from appearing vacant.

Special Instructional Areas

Special design consideration must be given to the facilities for science laboratories, fine and applied arts laboratories, industrial arts shops, homemaking laboratories, and the resource materials center. Each of these areas must be designed specifically for the special education activity to be conducted and planning should include outdoor as well as enclosed spaces.

Auxiliary Facility Areas

Auxiliary facilities for activities supporting and supplementing the educational program include spaces for administration, student activity and food service. Each of these areas will require special treatment to provide for both efficiency and space economy.

Facility Service Considerations

It is recommended that gang toilet-lavatory facilities be concentrated in a central location. This will provide economy in building costs and reduce the amount of supervision required for these areas.

Toilet facilities for adult use should be located in close proximity to administrative offices, faculty office suites, the teachers' lounge, and facilities which will have heavy public use such as the little theatre, and cafetorium. The need for other additional toilet facilities will depend some what upon the compactness and inter-relationship of the various schools within the plant. It may be desirable and feasible to provide larger and fewer toilet-lavatory areas. A supervision problem arises when too many small toilet areas are dispersed throughout the plant.

Floor drains and hose bibs should be provided in all gang toilet rooms. Careful attention should be given to the 'fall' of the floor toward drains, making sure there is no chance for water to 'pocket' and providing for complete drainage from any area within the room.

More efficient use and fewer custodial problems will be effected when towel and soap dispensers are located immediately above the lavatories. Mirrors may be moved to any area within the room.

The Arkansas State Plumbing Code will serve as a minimum requirement when considering the amount of toilet facilities or the size and grade on service lines. The city of Salem will furnish both sewer and water service to the school property which is located approximately one-half mile from the present city limits.

A number of refrigerated drinking fountains should be distributed throughout the school plant. These fountains should be located in areas where the nature of the activity promotes water consumption and areas which serve people gathered for spectator and participatory activities. This would include such areas as music, homemaking, industrial arts, the resource materials center, food service, and physical education.

One general receiving maintenance-storage area should be provided for the custodians and any maintenance workers. This space would contain a standard mop-sink with hot and cold water, a work bench, and moderate tool storage. A small office space with desk for the head custodian should also be provided. At least eight other work areas will be required, one in each school, the instructional materials center, the food service area, and the administrative complex. These closets should contain a mop-sink with hot and cold running water and storage for materials and supplies needed daily. From thirty-six to fifty square feet will usually be adequate for these sub-stations.

Each member of the student body should be provided with locker space for the storage of books, outer clothing, and other personal items. This space might best be located in the student activity area to minimize traffic congestion that many times occurs when lockers are placed against corridor walls next to classrooms or teaching stations. The location of lockers in the student activity area is recommended because surveys reveal that students go to the lockers an average of four times each day. Research indicates that the most common time for students to visit lockers is before school, at mid-morning, during noon hour, and after school. At each of these times the students are most likely to be in the vicinity of the student center or commons due to the nature of the activities that take place there throughout the school day.

A fall-out shelter is needed. An area embracing several counties in north Arkansas and southern Missouri have no protective areas designated by Civil Defense as adequate fallout protection. The school site should be studied carefully to determine the feasibility of constructing a shelter as a basement or split-level floor in part of this facility. An alternate bid should be taken at bid-letting to determine the extra cost involved and at that time the final decision could be made on whether to include the shelter in the contract.

Consideration should be given to the possibility of future plumbing, electrical, and mechanical requirements. Specifically, the possibility of field lights, score boards, sanitary facilities, broadcasting, and photography booths, and food preparation in and around the outdoor athletic areas should receive attention. Provision to extend mechanical service lines to meet the needs of additional buildings should be made during the preliminary planning.

Communication Considerations

A general two-way private inter-communication system should be installed which will provide for verbal communication among and between the major areas of the school plant. The control panel for this unit should be located in the Administration Center. Other units should be placed in all instructional spaces, department offices, offices in service and auxiliary areas, and in strategic corridor and outdoor court locations. It should be possible to originate calls from sub-stations as well as from the master console.

Telephones, connected through a local switchboard, should be installed in each departmental office and in certain auxiliary and service spaces to enable personnel to receive and make outside calls. The superintendent, principal, and project director should be provided with direct lines to the outside without the local switchboard control. In addition, public telephone booths for student and public use should be located adjacent to the Administrative Center and the Student Activity Center.

A bell and tone system with automatic program should be installed. The control panel for this unit should be located in the Administrative Center. Consideration should be given to a light-signal system which is deemed more successful with flexible scheduling with varying time modules.

The master clock and controls should be installed in the Administrative Center under the supervision of the switchboard receptionist. A clock should be placed in every classroom and each auxiliary area, as well as in several strategic corridor and outside locations. Unless otherwise indicated, clocks in instructional spaces should be installed on a side wall.

A fire and disaster alarm system should be installed according to specifications and requirements of the local code.

A central communication control system should be planned for the Resource Materials Center for electronic distribution of audio and video instructional program sources.

Sensual Environment

Research has been done which indicates that the learning process is influenced by the condition of cnes environment. Three factors are related closely with the results obtained, they are visual, sonic, and thermal. Economy is interpreted to mean greater ratio of results to money expended. Since the ultimate aim of educational building is to prepare areas for learning to take place, it is felt that the greatest economy lies in areas that have the proper balance between visual, sonic, and thermal elements.

Careful consideration should be given to selection, size, and location of heating and air conditioning equipment. Since the school will emphasize the individual approach to education, there will be occasions when one room, one area, or one school-within-the-school is being used. Location of equipment and controls should be arranged to provide individual operation within these areas.

Sound control should be recognized as one of the most important steps toward a favorable learning environment. Schools that have capitalized upon advantages of proper control of noise through acoustical treatment and use of carpeted floors have been observed. The overall effect on the educational process is measurable and observable. Mr. Lee Kock, Principal of the Valley Winds School near St. Louis, Missouri, stated that, "...no other one thing has ever exerted so much visible effect on the educational process as does carpet."[1] Based upon extensive research and personal observation, it is hereby recommended that all classrooms, library, and office areas be carpeted.

A pleasant, well-controlled visual environment is imperative if model conditions are to exist. Psychologist's have made studies that indicate that more than 80 percent of learning is acquired through ocular perception. It should be noted here that proper lighting and decorating through the use of colors will have a remarkable effect on the learning process of children.

Since light reflection is the most important physical property of color, it is necessary that careful consideration be given to selection of the decor. The following percentages of light reflectance are suggested:

Ceilings	not less than 78 percent
Walls	not less than 62 percent
Floors	not less than 38 percent
Wainscot	not less than 42 percent

Flexibility

Normally, children learn with tremendous rapidity, and it requires tremendous ingenuity to prevent them from it. However, it is believed that the lock-step process of graded education has managed to succeed in far more cases than is realized by the majority of public school educators today.

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[1] From a conversation between the author and Principal Lee Kock, March 30, 1966.

If this lock-step approach is to be successfully broken and if we are ever going to realize the potential of individualized instruction, every facet of education must be geared toward flexibility, including educational facilities. Many changes will occur within the normal life span of buildings now being planned. These changes can be expected in philosophy, methods, content, and enrollments. The original cost of a building with flexibility will be slightly more than the traditional, but the most expensive building is one traditionally designed to accommodate a static program, for immediately it is inadequate to properly house a flexible approach.

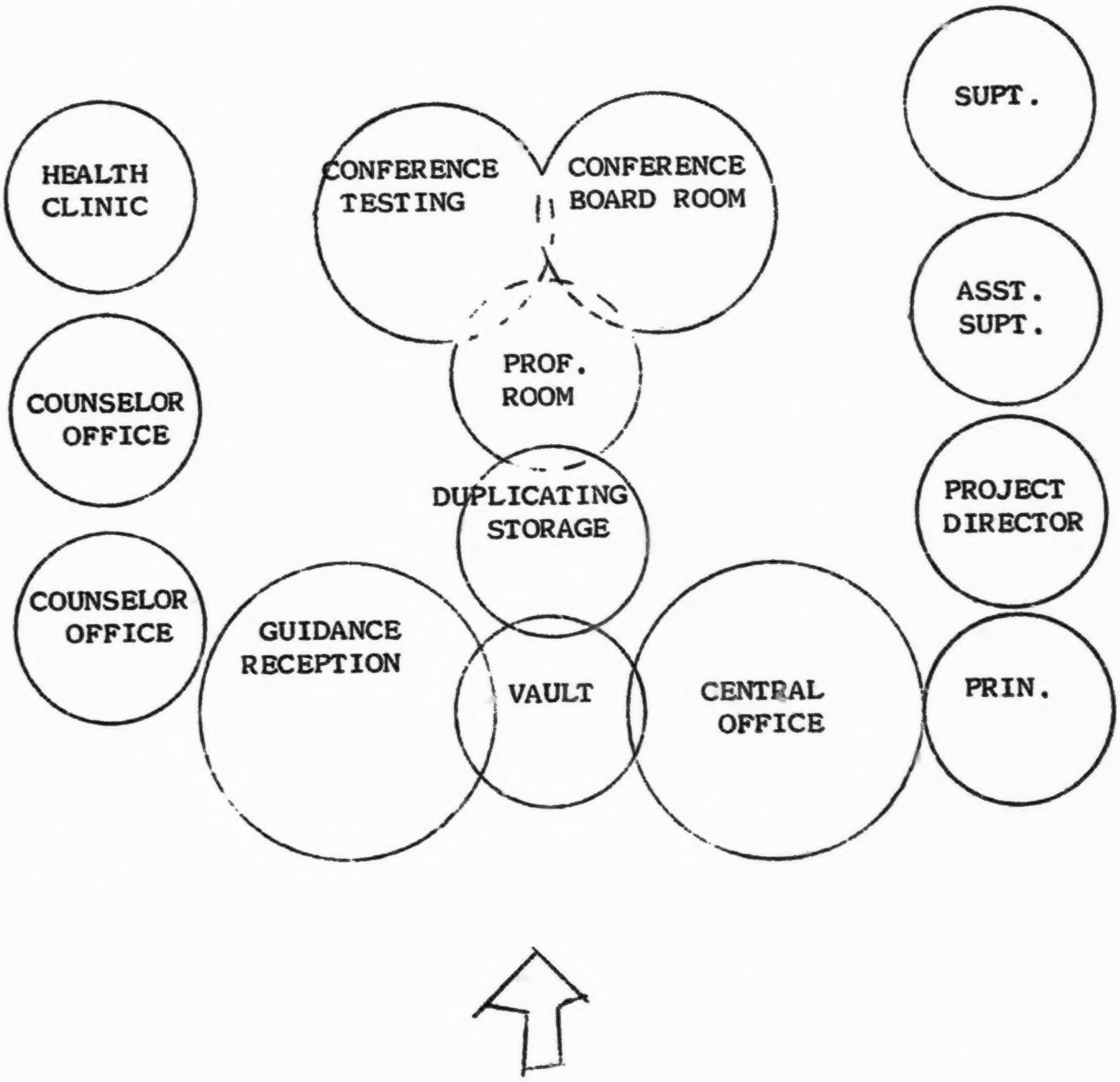
With this philosophy in mind, this model facility should respect two areas of contention:

1. Much attention should be devoted to provisions for individual study, large and small group instruction, heavy emphasis on use of a well-equipped educational center, team teaching, and the research and experimental approach.
2. Since visual perception ranks high as a process in learning, visual distractions are assuredly of greatest importance. To prevent these distractions, it is recommended that careful consideration be given to the use of non-weight-bearing folding partitions, or portable space dividing units such as those manufactured by Mutchler Brothers Co., Napponee, Indiana.

Orientation, Relationships and Circulation

Attention must be given to separating noisy areas from those in which quiet is desired and to the relationships among activity areas. General classroom spaces must be so located that groups of students can move readily between departmental areas and the library and between the large group instruction areas and the library. It must also be convenient for the instructor to move about the classroom to any work station, and for any pupil to move from one work station to any other part of the room. Likewise, it must be possible for work stations to be arranged and re-grouped for different kinds of activities. All spaces should, for efficient utilization, be located in relation to each other in a design which facilitates circulation of traffic and minimizes interference.

ADMINISTRATION AND GUIDANCE CENTER


SUPT.
HEALTH CLINIC
CONFERENCE TESTING
CONFERENCE BOARD ROOM
ASST. SUPT.
PROF. ROOM
COUNSELOR OFFICE
DUPLICATING STORAGE
PROJECT DIRECTOR
COUNSELOR OFFICE
GUIDANCE RECEPTION
VAULT
CENTRAL OFFICE
PRIN.

ADMINISTRATION, GUIDANCE, AND HEALTH

The administrative function in any system is a means to an end. This administration and its office organization will serve in a dual capacity. First, it will serve as a means in the operation of an efficient school; and secondly, it must be responsible for the research, assimilation, and dissemination of pertinent information regarding this model program.

This administrative complex must be located near the entrance of the school plant convenient to driveways and parking for the benefit of parents and other visitors. It should afford maximum visual control of the facilities and easy accessibility from other areas. In addition, caution should be given to assure maximum privacy and ample space for the many and varied responsibilities of administrative personnel.

Developed as a "model program" with Title III funds, this facility will become a show place for rural education. The project director will be directly responsible for organization and dissemination of information about the program and will plan and implement a public relation program for all visitors to the facility. Space must be available for briefing and defriefing of groups estimated to be as large as 30 in number.

In order to be effective, the guidance program must be considered as an integral part of the total school program. Guidance must be directly related to the educational objectives of this school until there is no longer any opportunity to serve.

This department must have facilities to collect a backlog of information on students and provide for informative materials on opportunities and requirements.

It is imperative that the school, home, and community work closely together in support of the guidance program. The administration must provide the necessary leadership and facilities for proper coordination of this program into the total school program.

Consideration should be given to the opportunity offered in reception rooms to disseminate information regarding that department through the use of permanent projection equipment using endless "short story" films.

Administrative Functions

1. Central communication system
2. School business transactions
3. Program administration, research, analysis, evaluation
4. Knowledge dissemination regarding the program to other interested systems
5. School and community coordinating center
6. School record repository
7. Counseling for: Students, Teachers, and Parents
8. School program planning center
9. In-service teacher training

The Salem Model School will make demands upon the administrative staff that will be somewhat expanded. Recorded progress of every aspect of the school will need to be detailed and made ready for immediate use in future planning. A highly specialized program of in-service training for faculty personnel is imperative.

The health unit should provide for an examination office and sick bay for at least six persons. Provisions should be made for flexibility within this unit allowing privacy for both boys and girls.

Suggested Physical Space Requirements

FACILITIES	AREA NECESSARY (Sq. Ft.)
Office of Superintendent	200
Office of Assistant Superintendent	175
Office of Principal	175
Office of Project Director	175
2 Counselor's Offices	300
First Aid	400
Reception, Counseling	400
Reception, General	400
Conference and Faculty Rooms	1,500
Vault, Materials Storage and Duplicating	400
TOTAL	4,125

Furniture, Equipment and Storage

The architect is directed to design and build-in as much of the office furniture as seems feasible. Furniture should be selected by design so that interchange can be made throughout the administrative complex without distraction.

Design should provide for maximum convenience in the use of

1. The school inter-communication system
2. Bookcases in office areas
3. Business machines in office area
4. Kitchenette facilities in professional room
5. Professional library display
6. Adequate lavatory spaces
7. A minimum of six hospital beds
8. A walk-in fire proof vault

9. Record storage
10. Medical storage and first aid equipment
11. Guidance shelving and display racks for dissemination and materials
12. Flexibility in conference and testing areas

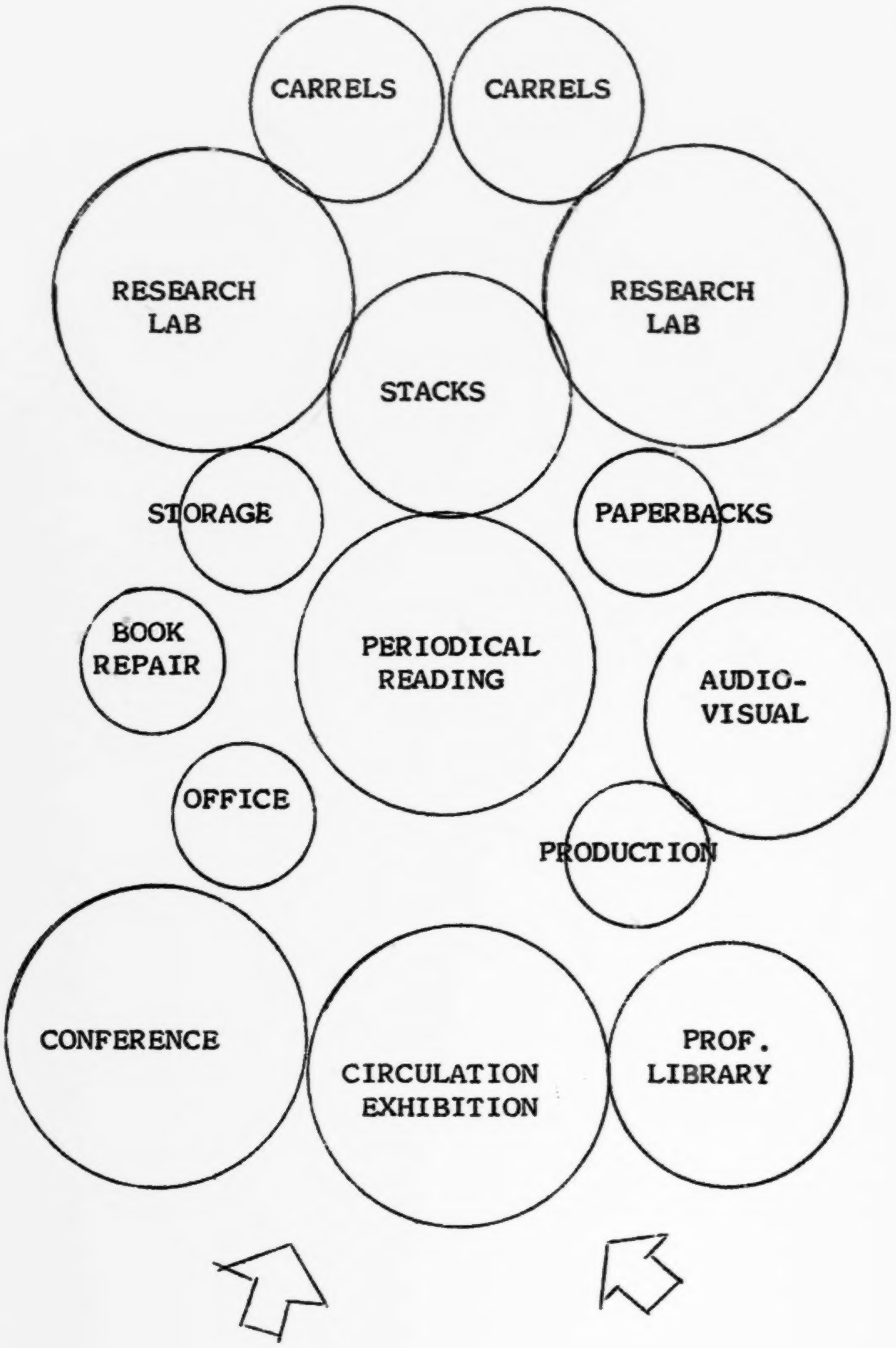
Unique Arrangements

Planning should afford an atmosphere of spaciousness through the use of glass partitions between administrative offices and central office areas. The administrative offices should be arranged to effect an over-all visual control of the facility.

The use of carpeting in this facility will enhance its usefulness. Special attention should also be given to acoustical treatment, to reduce excessive noise of business machines.

Reception areas should be equipped with projection equipment to offer educational materials to visitors on endless film tracks. Placement of furniture in the waiting areas should be arranged to afford visual comfort in the viewing process.

INSTRUCTIONAL MATERIALS CENTER


CARRELS
CARRELS
RESEARCH LAB
RESEARCH LAB
STACKS
STORAGE
PAPERBACKS
BOOK REPAIR
PERIODICAL READING
AUDIO-VISUAL
OFFICE
PRODUCTION
CONFERENCE
CIRCULATION EXHIBITION
PROF. LIBRARY

INSTRUCTIONAL MATERIALS CENTER

The quality and quanity of many different educational materials now available for educational purposes makes library planning a very technical and complicated task. Planning must be done in a way that will permit students to independently search, discover, and satisfy their own innate curiosity. Ready availablility is a key factor if materials are to be used extensively.

Teachers must have access to resource materials if they are to enrich the instructional program and stimulate the quest phase of the educational adventure. This necessitates the location of this facility at the axis of the campus. Its central location and profound influence over the rest of the program makes it imperative that the library materials center serve as the heart of all learning activities within the school and community. Though geographically located at the hub of the school facility it must retain a position readily accessible by all who approach the school in quest of knowledge. The use that is made of the instructional materials center will determine, to a large extent, the quality of the entire educational program for both youth and adults.

Objectives

It is the desire of those concerned with the planning and implementation of this model program to adopt the educational objectives as outlined in School Libraries For Today and Tomorrow as the basic aims of this program.

Physical Areas and Activities

There are seven different areas within the instructional materials center that can be identified separately because of specific functions each contributes to the coordinated program. Because of the differences in some of these functions, especially in the research areas, it is necessary to plan the facility in such a way as to prevent confusion and interferences.

1. This instructional materials center must have an attractive, spacious lobby that will render a favorable attitude upon entry. This area will serve as the key to the library, for it will be home base for the librarian. The following services and activities will be located here:

   a. The circulation and information desk
   b. Equipment for exhibition of new materials
   c. The card catalogue (25,000 capacity)
   d. A furnished lounge area where students can do recreational reading and browsing which will include reading newspapers, periodicals, annuals and general informative pamphlets
   e. The periodical display (100 magazines)
   f. The library stacks (20,000 capacity)
   g. Reference area (included in f above)
   h. Entrance to a paperback bookstore
   i. Immediate accessibility to all other areas of the facility

2. Research Laboratory Number One

   a. The heart of the instructional materials center will be a research laboratory. This will be a spacious, well-lighted area with immediate accessibility to the stack and reference areas. It must be large enough to seat 80 students in private dry carrels which have shelving, work space, comfortable seating and adequate light for close work.

b. The perimeter or a designated area within the research laboratory should be organized into at least ten booth carrels, acoustically treated and equipped with typewriters.

c. This area should be visible from the circulation and office area through glass wall construction permitting necessary visual control. This should be considered the "quiet" area for individual independent study and no visiting or group work should be allowed.

3. Research Laboratory Number Two

a. A second research laboratory should be designed with equal accessibility to the stacks and reference works and with equal visual control made possible through location and use of glass construction. This area should be large enough to seat 40 students comfortably around tables. These tables should vary in size from two to six and use the same comfortable chair as is used throughout the facility.

b. The perimeter or a designated area within this research laboratory should be organized into at least ten booth carrels, acoustically treated and electronically equipped with accessibility to any live or taped programs originating anywhere on campus. These booths should be adequate in size and equipment to permit use by two students simultaneously.

4. Audio Visual Nerve Center

a. Space to store, maintain, and circulate equipment and visual aid materials should be accessible from the circulation area and should not require a second circulation center but should work through the main circulation desk.

b. One area should be designed for previewing, viewing, listening, and taping of visual aid materials.

c. The nerve center should be equipped with a three foot by eight foot counter type distribution panel. All signal producing equipment must channel through these distribution facilities. This includes tapes, turntables, video, etc.

5. Professional Room

a. The professional library should occupy a prominent position in this facility and should be so located that the circulation desk can handle check outs from this library.

b. There should be three, single, sound proof booths equipped with typewriters, and adequate space for one large reading table and five to seven casual chairs with reading lamps.

6. Flexible Classroom

a. One large flexible classroom should be located within this complex. It is suggested that the room contain 1,200 square feet and be divisible into three conference rooms by use of folding walls. To provide for flexibility in having groups of different size the smaller conference rooms should vary in area from 300 to 500 square feet.

b. This large room should be equipped with an elevated platform, projection screen, and television receiver.

7. Other Areas

a. A paperback bookstore
b. Office space
c. Library workroom
d. Periodical and Micro-film storage
e. Maintenance area
f. Production area

Suggested Physical Space Requirements

FACILITIES	AREA NECESSARY (Sq. Ft.)
Library circulation, lobby, research laboratories, stack area, private booths	5,000
Conference Rooms	1,200
Professional Library	600
Audio Visual Nerve Center	800
Bookstore	200
Office Area for Two	200
Workroom	150
Production Area	200
Storage	200
Maintenance	50
TOTAL	8,600

Special Considerations

In order for the instructional materials center to serve its maximum purpose in the total educational program, it must be furnished with equipment of the highest quality. A superior grade of library equipment, which can only be furnished by a reputable manufacturer, should be chosen.

1. Highly seasoned hardwood is recommended.
2. All shelving should be adjustable.
3. All work areas should be of formica or equivalent.
4. The entire facility should be carpeted.
5. Special attention should be given to the acoustical treatment in all areas, especially the ceilings.
6. The facility should be fully air conditioned and thermostatically controlled.
7. Windows should not be used in areas where they will interfere with shelving and storage.

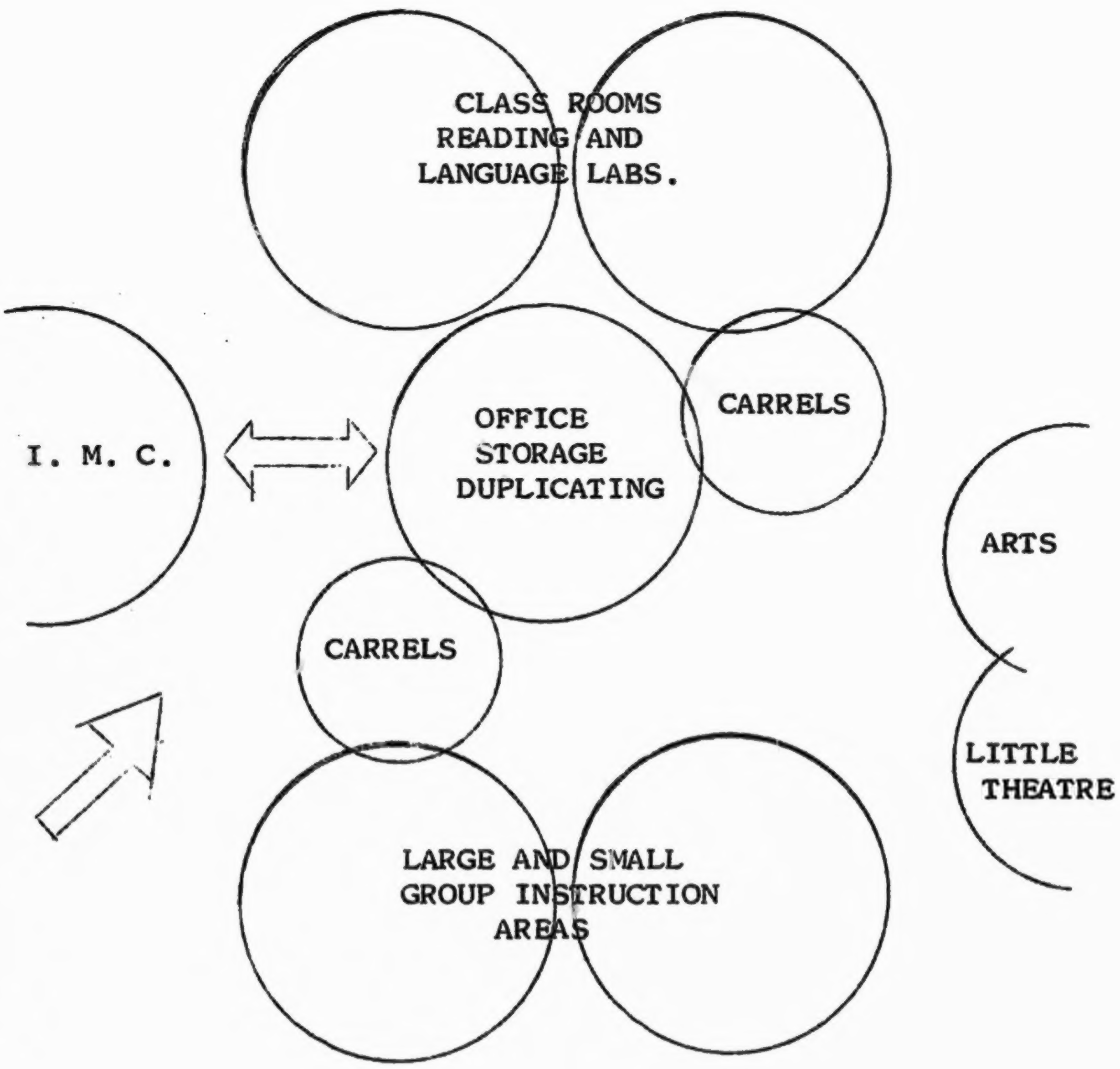
8. Location of this unit should be away from those areas of the plant where excessive noise will be a factor.

9. Maximum visual control should be made possible through use of heavy glass partitions.

10. Doors should be held to a minimum. The main flow of traffic should be through the area designated as circulation.

11. Lighting must be adequate and properly distributed to prevent shadows in the areas where carrels are used.

SCHOOL OF LANGUAGE ARTS AND SOCIAL STUDIES


CLASS ROOMS
READING AND
LANGUAGE LABS.
I. M. C.
OFFICE
STORAGE
DUPLICATING
CARRELS
ARTS
CARRELS
LITTLE
THEATRE
LARGE AND SMALL
GROUP INSTRUCTION
AREAS

SCHOOL OF LANGUAGE ARTS
ENGLISH, SPEECH, JOURNALISM, AND FOREIGN LANGUAGE

All high school graduates of this area from 1950 to 1966 have been surveyed to determine the strengths and weaknesses of their high school curriculum and to determine what they believe to be the most important area of concentration for the model school curriculum. Results of this survey suggest that the communicative skills are the most useful tool of their high school learning. This supported by a survey of all dropouts from 1960 to 1966 which indicated that a problem in the communicative skills existed in every case. Furthermore, educators across the nation almost unanimously agree that the most important subjects in the public school today are reading for the elementary child and English for the upper grades.

The traditional lock-step approach to the teaching of English has done little, if anything, about the intellectual despair found among both students and teachers of English. The former United States Commissioner of Education, Francis Keppel, recently suggested that teaching in this field is "in critical need of increased active, and vigorous support." Executive Secretary of the National Council of English Teachers, James R. Squire, went still further and warned that "without reform, English classes across the country will go on wallowing in dull lifeless teaching, devoid of one iota of excitement."

In his book on Appropriate Placement, Dr. B. Frank Brown contends that "Grammar is universally poorly taught by teachers who don't know the subject." What seems to be more revelant at this writing is a second point made by Dr. Brown; even though "Grammar is unpleasant and poorly taught..., it is monotonously reviewed every year."

With an eye toward a greatly revamped English curriculum this plan provides for space that will adjust to meet the varying demands including large and small group instruction and a laboratory where students can find the privacy necessary to work with their individual problems in reading without the adverse influence of having to perform before a group.

Language arts teachers must make constant use of the many and varied opportunities found in the instructional materials center. It will be well equipped with all types of printed matter chosen on many levels of difficulty to meet specific needs and will offer unlimited opportunity for students to study on an individual basis or in groups with access to many of the technological learning aids.

The new English curriculum lends itself well to the multiphased approach. Using the tools of placement explained earlier in chapter one, students will phase into this program on the level of their achievement and will find subject matter changing with need rather than on a semester or yearly basis.

A block of time--the semester, for example--is not the sole determinant of a lock-step approach. In fact, the greatest dam along any tributary of knowledge has been the traditional textbook. Teachers with insufficient knowledge of their subject and lacking self-confidence have come to rely heavily upon the textbook approach. It is a rare occasion, and indeed a coincidence, when material found in the text parallels an interesting phenommenon which occurs during the child's day at school.

Resource materials will be available with breadth and depth necessary to support development of curriculum on a unit or concept approach.

Since need, interest, and appropriateness rather than time will determine when students advance it is imperative that the facility housing this program be able to adjust with the program at any time during the school year. No quality other than flexibility and accessibility are quite so important.

Activities in English Include

1. Speaking - dramatic adaptation of literature, discussion groups, oral student reports, preparation for extemporaneous speeches, oral interpretation and panel discussions.
2. Composition - creative writing, narration, description and argumentation, discussion of rhetorical principles, group discussions, composition of sentences, paragraphs and themes, vocabulary study, and utilization of audiovisual aids.
3. Literature - lecture, oral interpretation, creative writing, analysis, small and large group discussions, oral and written criticism of both professional and non-professional works, and dramatic presentation of literature.

4. Reading - individualized and group, silent and oral, speed and comprehension, and full utilization of technological learning aids and new concept materials in this field.

Suggested Physical Space Requirements

In addition to approximately 635 students who will pursue requirements of four years of basic English taught within the framework of a four phased program, 100 or more students will elect to pursue courses and activities other than basic English--e.g., speech, debate, reading, foreign language, creative writing, and journalism. To meet the space requirement for this program the following allocations are suggested.

FACILITIES	AREA NECESSARY (Sq. Ft.)
Two Standard Classrooms	1,500
Flexible classroom area for large and small group instruction	2,400
One Journalism Laboratory	900
One Foreign Language Laboratory (30 Stations)	900
One Speech Laboratory	800
One Reading Laboratory	750
Office and work space for ten teachers and a secretary	800
Extra allowance for student carrels and storage	400
TOTAL	8,450

If any program in education is to be truly innovative it must approach change with two groups in mind. First consideration is by necessity the student and his welfare. Following closely is the position of importance placed upon the teacher.

The traditional lock-step, textbook centered curriculum can continue to function as it has since the organization of the first public high school in America. By requiring the student to adjust to the curriculum and never worrying about adjustment of the curriculum to the needs of students, teachers can function within the traditional box-like structure, with no more equipment than a desk, filing cabinet and a good set of textbooks. But if it is important to plan and if curriculum should adjust with need, interest, and appropriateness then teachers must have time to plan and must have surroundings and equipment which will influence them to do quality work. Nothing will enhance the dignity of their station in the educational complex more than the provision of a private office to be used as home base.

The language arts complex should revolve around a centralized and individualized suite of teachers' offices, storage and duplicating room, and a group of student carrels. Surrounding and adjacent should be the classrooms and special laboratory rooms. Special consideration should be given in the planning of rooms for speech, journalism, reading and foreign language. No more than two standard classrooms are needed; the remaining instructional space should be made flexible by use of folding partitions.

Careful planning must provide for the location of the little theatre, instructional materials center, and social studies complex to be in the immediate vicinity.

Speech

On the average, boys and girls spend seventy percent of their time communicating and seventy-five percent of this is at an oral level, either speaking or listening. It is the responsibility of the speech department to improve and enrich this broad area of communication. The colloquial style of the teenager who has been subjected to rural influence is far from desirable. Though written communciation needs drastic improvements, deficiences here are no more pronounced than they are in the area of oral communication.

It will be necessary for the teacher of speech to work closely with teachers in the fields of social studies, music, and art and to open doors to groups and agencies within the community.

Students with interest in this field should be able to obtain instruction in basic public speaking, dramatics, and debate.

There are several important co-curricular activities which should be under the direct sponsorship of the speech department. An active chapter of the National Forensic League and/or an active chapter of the National Thespian Society should be formed. In addition to the junior and senior plays, at least three major theatrical productions should be produced in cooperation with the art and music departments. This department should be responsible for the selection and obtaining of several professional theatrical groups to perform in this area. This type of enrichment can exert a profound influence in a deprived setting, where few if any have ever viewed a professional act.

Physical Requirements

One classroom laboratory will furnish adequate space if proper utilization of other available facilities is made. The dramatics class can be taught in the little theatre, for example.

The speech room should be provided with a raised platform across one end of the structure. Several outlets for microphones should be installed and tied in with a set of hi-fidelity speakers. A fully equipped sound control room and dressing room should either be in the speech department or as a part of the little theatre and located very near the speech laboratory. Two turntables, tape recorders, and proper facilities to permit training in radio production work should be readily available. The transmitter used in radio production should be adequate in size to permit distribution throughout the school plant via the inter-communication system. Quality in sound is more important in this department than is true in some of the other areas; therefore, the importance of good acoustics here cannot be over emphasized.

Foreign Language

The primary objective of the foreign language department will be to develop the fundamental communicative skills of language which are listening, comprehension, speaking, reading, and writing. In modern foreign language this will be accomplished by audio-lingual methods.

Both Spanish and French will be phased into the curriculum at a level which will permit all interested students with average ability to pursue either or both languages. Spanish will be offered at phase two and three levels, and French will be offered at phase three and four levels.

During two years of basic studies with the guidance of a regular assigned teacher, the foreign language department will endeavor to establish a yardstick by which students can measure their own language, culture and ways of living. Language will be taught as the central feature of the culture in which it is spoken with the hope that an understanding and appreciation of other cultures can be established.

To approach any degree of fluency, a longer continuous study is recommended. Provisions for two additional years of individualized study with teachers by appointment will be made available through the use of programmed materials via records, tapes, and books. Students pursuing advanced levels of competency in a foreign language will be expected to accept major responsibility for his daily participation and will seek guidance and direction only from his advisor.

Highly motivated students may choose to study any language they desire providing programmed materials are available in the language, and their past achievement indicates that they are capable of doing independent study without the usual two years of background information and competences.

The cultural background in language study must be emphasized; for this reason there will be broad usage of films, literature, drama and music.

For advanced students the department will select a plan of study which will use film, records, tapes and materials which parallel a comprehensive scope and sequence plan.

Enrollments and Activities

It is estimated that about one sixth of the total enrollment or 110 students will elect to take one of the basic languages and that an additional 45 students will choose to either pursue the study on advanced levels or will choose to do independent work in another language.

Teaching techniques to be used in this department will capitalize on the opportunity to use small and large group instruction. The teachers will work as a team and rely heavily upon teachers of social studies, literature, art, and music to furnish a balanced approach to the background study of the culture being taught.

The closeness with which these teachers will work makes it imperative that the facilities be arranged to provide accessibility and atmosphere conducive to team teaching.

Physical Requirements

The foreign language department will be considered a part of the language arts department. Teachers will have access to the centralized storage, work space and office area around which the classrooms are clustered.

Careful consideration must be given to the planning of the learning laboratory. There must be a wide range of flexibility afforded through the use of a console and a thirty station learning laboratory. Further expansion and flexibility can be provided by arranging one bank of private carrels (at least 5) appropriately in the area and making inter-communication possible between the carrels and the laboratory console. It must be possible for teachers to provide a minimum of three levels of instructional materials in two different languages simultaneously.

It should be possible to provide students in the instructional materials center with instruction originating at the language laboratory console.

The laboratory should be conveniently located with access to one standard classroom and one flexible room for large and small group work.

Storage should be provided in this immediate area for film strips, tapes, records and other materials which will be used only by the language department. This storage should be adequate to afford room for the projectors, recorders and other visual aids equipment necessary for extensive usage.

Special Considerations

The language arts complex, including speech and foreign language, should be carpeted and treated for adequate acoustical control and quality of sound.

Lighting in all quiet areas should be designed to prevent the usual interference from transformer hum. In electronic areas, planning should prevent static interference from utilities by using resistors if necessary.

The complex should be fully air conditioned for year around comfort. Both heat and air conditioning should be developed on an area basis to permit use of certain areas without the necessity and expense of heating or cooling the entire complex. Probably no more than the equivalency of four classroom spaces should be serviced by each basic unit of conditioning. The auditorium and little theatre complex, which is considered a part of this complex of facilities, should be independently serviced.

THE SCHOOL OF SOCIAL STUDIES

The use of federal funds made available through the National Defense Education Act has spurred the teaching of math and science to a degree of competency noticeably above that done in the areas of language arts and social studies. In fact, the social sciences have been neglected to a greater degree than any other area of the curriculum. This is ironic, indeed, because circumstances of the nation or a community usually leads to a pragmatic solution to problems that exist. During the culminating years of World War II the physical education program became the center of criticism and consequently was upgraded. When Russia fired the first space shot, immediately every level of authority, including congress, insisted on new and better methods in science and mathematics.

It is obvious to the casual observer that the plight of the rural Arkansas community is a direct result of poor economics and inferior leadership; yet little has been done to strengthen the curriculum in the social science field.

Many essential resources for progress are abundant in this area--e.g., manpower (unemployment is high), land (11 people per square mile), water, timber, electricity, limestone, dolmite, silica sand, and ideal climatic conditions.

The greatest need in the area to be served by the Salem Model School is a basic understanding of the social and economic forces that influence any community to progress; and in this situation, there is hope for progress if students and adults are led to see that non-progressive attitudes and inadequate leadership are the basic deterrents to progress.

Educational Objectives

The aim of this social studies program should help each student to develop attitudes, understandings and skills necessary for roles they will assume in a changing democratic society.

One unique but rather important outcome for students will be related to the economic condition of this immediate area and possible solutions.

Innovative Approach

It must be emphasized here that a program or technique which may be revolutionary for the Salem area may not be considered as nova in another area of the country.

Through the use of a team approach and individualized independent study it will be possible to offer a broader and more comprehensive curricular offering, with greater emphasis on the how, why, and results of human events.

Lecture will remain a part of technique, but will no longer be the predominant method. Believing that groups of two to six can profit more by individualized study and small group dynamics, this technique will become the major tool for teachers and students.

Quality teacher preparation requires extensive time and also privacy with easy accessibility to resource materials. This phenomenon dictates the direction of planning in the physical facility as well as the curriculum content and approach.

Extension of the curriculum will be facilitated through greater use of programmed teaching materials, which are being produced at a rapid pace. This will permit smaller classes, sometimes three or four students with interest in specific fields, or at advanced levels of learning. Teachers by appointment will serve as supervising instructors for students doing independent study. Space requirements must be provided for this aspect of the new program.

Enrollment and Activities

The socio-economic level of those living in this area is extremely low. It is imperative that the social science department move ahead with forceful and aggressive techniques that will change the attitudes of both the student and adult.

A special effort will be made to encourage all students to participate in classes of instruction in American history and economics as a minimum program and to make other courses of interest elective.

The anticipated enrollment in all social science areas is about 400 students. The basic class size will be held to a maximum of 25 students. However, organizational patterns such as team teaching of small and large groups will direct enrollments in many areas. Provision must be made for large group lectures and film presentation, where as many as 100 students will participate. This same space must be controlled by movable partitions and acoustical treatment that will provide many small group work areas where from 3 to 10 students can find the privacy necessary for eventful small group dynamics.

Suggested Physical Space Requirements

The space requirements for all levels of social studies should have accommodations for a minimum of 400 students and five teachers. Space allocation should be made for two large flexible classrooms with approximately 1,600 square feet of floor space each. Folding partitions should make possible a minimum of six small group instructional areas within this same space. One regular classroom is desirable and the remainder of the 4,400 square feet of space should be devoted to work, conference, office space, and individual carrels.

Intra-school traffic should be outside and generally away from this complex of classrooms. Internal traffic will consist mainly of movement between classrooms within the social studies area and from teachers' work space to classrooms.

Consideration should be given to provisions for combining three or four regular classroom spaces into one large lecture hall by use of sound proof operable walls.

Carrels and classrooms should be equipped with electronic retrieval equipment making it possible to use every visual and audio-visual apparatus within the means of this facility.

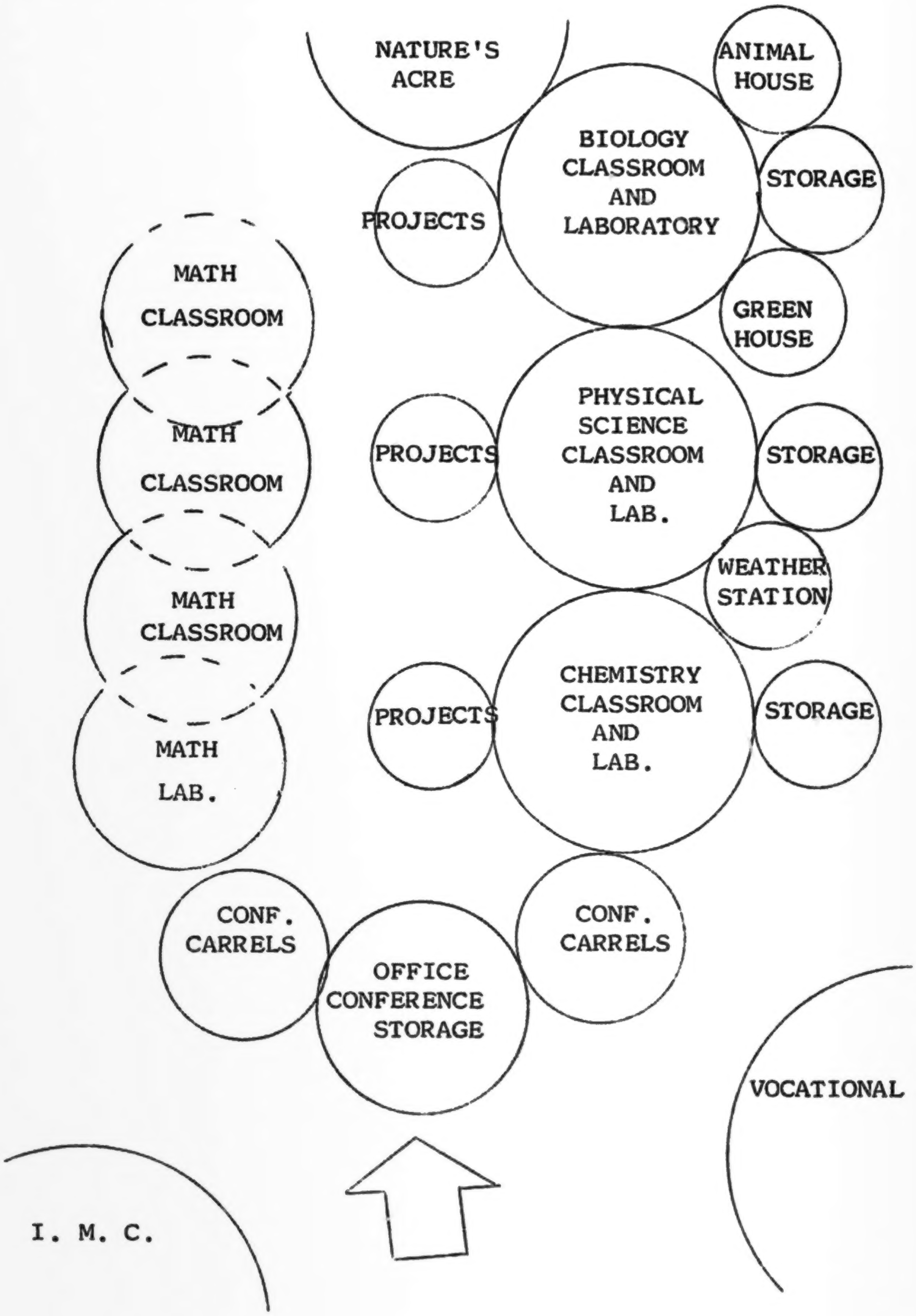
The social studies area should be located adjacent to the instructional materials center and the language arts department. The little theatre should be close by.

Because of the nature of the activities and the organizational pattern of instruction, great care should be given to the acoustical treatment of ceilings and partitions. Carpeting is recommended throughout this complex, both for the acoustical value afforded and for the atmosphere created by its use. Air conditioning should be developed on an area basis to prevent the cost of cooling or heating large areas when smaller areas are being used. Consideration should be given to making all office and work space areas independent from classroom space. This should be carried out in each school when space involved is large enough to be significant.

Provision must be made for shelving and storage in each classroom adequate for extensive use of books, papers, magazines, maps, globes and mechanical visual aids. Wall spaces should be divided so that about one half is devoted to tack board; about one sixth to peg board; and one third to chalk board. All carrels should have desk and shelving installed.

Drinking water, rest rooms, and utility areas should be located in a close proximity to this unit.

SCHOOL OF MATHEMATICS AND SCIENCE


NATURE'S ACRE
ANIMAL HOUSE
BIOLOGY CLASSROOM AND LABORATORY
STORAGE
PROJECTS
GREEN HOUSE
MATH CLASSROOM
MATH CLASSROOM
PHYSICAL SCIENCE CLASSROOM AND LAB.
PROJECTS
STORAGE
WEATHER STATION
MATH CLASSROOM
CHEMISTRY CLASSROOM AND LAB.
PROJECTS
STORAGE
MATH LAB.
CONF. CARRELS
CONF. CARRELS
OFFICE CONFERENCE STORAGE
VOCATIONAL
I. M. C.

SCIENCE AND MATHEMATICS

The Science Zone

The nature of modern science and discernible trends in teaching requires a closer integration between the laboratory program and the lecture and discussion phase of the subject. If provisions are to be made in the Salem Model School to incorporate the newest trends in the teaching of science the general principal of design will require that each class have a laboratory available at any time during a period as opposed to one that is available on given days of the week. The new central importance of the laboratory program and the individualized research expected from students necessitates particular attention to planning for flexible and accessible use of this facility.

Students must be able to observe evidence and discover its significance before the principles which grow out of the evidence are read about or discussed. Thus, timing is of extreme importance and the science laboratory must be available for use at any opportune time for experimentation. Laboratory experiments are most effective when each student conducts his own to answer a personal question or to solve a personal problem.

The following new trends in science instruction will be put to full use and practice in this facility:

1. There will be some teacher demonstration, but the

prime method of instruction will shift toward pupil experimentation.
2. Extensive use of pupil-teacher planned experimentation will be utilized instead of teacher manipulation through detailed instruction.
3. An intensive effort will be made to encourage all students to participate in two or more years of scientific research and instruction. Levels of instruction will be phased to meet the needs of students who may not go to college.
4. No particular sequence of subjects in science will be required. Students may choose areas of interests and concern without pre-requisite requirements.
5. More homogeneous grouping of students in science will be obtained through the phased approach. Both interest and ability will play equal roles in grouping.
6. Extensive opportunities for use of audio-visual and programmed materials will be afforded. This will be most evident in the area of individualized instruction.

Extensive publication of materials in physics developed by the Physical Science Study Committee are now available and will be used in the new science curricula. Physics will be presented as hypothesis. This encourages students to think, prove, and demonstrate, while little or none will occur on the basis of authority.

Equally important to the Physical Science Study Committee materials in physics are the Biological Science Curriculum Study materials in biology. These materials were developed by the Biological Science Curriculum Study in 1962, and are now readily available. In 1963 and 1964 extensive research and major revisions were made in this material to adapt it for use with the slow learner. The exclusive use of these materials and the approach to learning suggested by them will revolutionize the teaching of biology in this area of the country.

Enrollment and Physical Requirements

It is expected that approximately fifty percent of the school's enrollment will participate in one or more science courses at any given time, and this is expected to increase to seventy percent within two years of operation. Heavy emphasis on laboratory research and the develpment of materials that can be used by low ability students will increase the popularity of studies in science. About 325 students will elect science courses during the first year of operation. Projection of area enrollment is as follows:

COURSE	FIRST YEAR	BY THIRD YEAR
Biology	125	168
Chemistry	45	63
Physics	30	42
Other Physical	105	141
Other Biological	20	30
TOTAL	325	444

MATHEMATICS

The twentieth century has experienced the greatest revolution in mathematical history. Concepts previously restrained by the gravitational barriers about the earth have now been released to explore space to infinity. This revolution has become possible through research, the automation revolution, and the introduction of high speed, automatic digital computation.

One of the greatest crises ever experienced in education now faces the public school. It has been brought about by the unprecedented speed at which we are moving into a new technological era. Man has never realized before how great a part mathematical calculations must play in the success of his future. Mathematics can no longer be taught as just a way of computation but must now be approached as a way of thinking. Effort must be placed on analyzing and understanding problems already solved, to insure a better transfer of knowledge to the unknown problems of the future. Time must be given to individual students for discovery of new concepts and facts, many of which are still unknown to both student and teacher.

Objectives

It shall be the objective of this program to prepare the students in this rural area presently, and in the future, by helping them develop study habits, attitudes and skills to solve their personal problems and to develop an appreciation for mathematics as a means to the advancement of our society in a space age.

The Math Zone

The nature of modern mathematics and discernible trends in teaching require a closer integration between the math lecture and demonstration area and the zoned areas for independent research and concentration. Mathematics has always demanded a great deal of personal involvement. The "new mathematics" is no exception. Extensive practice is imperative if students are to realize the pleasure of success. Extensive practice with concentration can best be accomplished in surroundings which afford appreciable isolation and privacy. For these reasons careful attention should be given to flexibility within the mathematics complex. At least two of the four classroom areas should be developed as learning centers with individual carrels built around the perimeter. Little additional expense will be necessary to wire these carrels for use of projection, audio, and calculating equipment.

The mathematical curriculum is in a constant state of change. The graded rural school has not been able to keep up with new discoveries which have been made in the past decade. The Salem Model School will attempt to keep abreast of new trends and make them applicable in the classroom by preparing to flex and bend with the times. Curriculum, continually revised, can function only if the attitude of personnel, and physical facilities are flexibly orientated.

Current trends which will be adapted to this program are

1. Understanding of the nature and role of deductive reasoning.
2. Integrating concepts of special perception with those taught in plain geometry.
3. Emphasizing insight and reasoning.
4. Emphasizing structure and patterns, by using sets, variables, relations and functions.
5. Phasing mathematics at a pace and level to meet the needs of each learner.
6. Using team teaching with emphasis on individualized instruction.
7. Using extensively visual aids, closed-circuit T.V., programmed learning devices, and scheduling of individualized study periods.

Student-Teacher Activities

Students will be exposed to explanations of problems and proofs of theorems given by both teachers and students. Students will view films and film strips in groups and will then have access to these materials for review and reinforcement. Large group, small group, and individual study will be regulated to best meet the needs of each student.

Instead of the usual study hall situation, students will schedule a study period under supervision to construct mathematical models and develop mathematical displays. Projects will be developed to compete in state and national mathematics contest. Field trips will include visits to Arkansas State College, the Little Rock I.B.M. Corporation and similar institutions using computerized techniques.

Anticipated Enrollment

The ideal teaching load in mathematics is believed to be smaller than is possible in other disciplines. Those who elect to spend twelve to fifteen hours each week in this field will require a supervisor with extra time to prepare direction and research ideas. A ratio of sixty to one with classes of ten to sixteen will be most satisfactory.

Students with inadequate computational skills also place heavy demands upon instructors and can progress best when the teaching load is held to a maximum of sixteen to one. Only when a class has been determined capable of advancing at a normal and satisfactory pace can as many as 25 students be taught adequately by one teacher.

It has been estimated that about 45 percent of the total enrollment will pursue one or more courses in mathematics at any one time and that this should rise to at least 60 percent within two years after this program is originated. About 281 students will elect a math course the first year and the gain will be to a minimum of 375 as predicted. Based upon these estimates there should be four classroom laboratory areas and four teachers within two years.

This facility should be in close proximity to the science lab lecture areas making multiple use possible when additional teacher stations are necessary.

One classroom should be self-contained with individual carrels bordering three walls, retaining the fourth for the teacher's demonstration equipment. All carrels should face the front of the room to allow visibility with a minimum of difficulty. The central area should be equipped with individual math lab stations equal to those manufactured by American Seating Company. This laboratory will be designated as an advanced mathematics station.

The other three rooms should be organized so that they can be opened up for large group instruction. One of these rooms should have at least 14 individual carrels arranged to face the front of the room and also the speakers platform during large group instruction.

Central heat and air conditioning should be zoned to permit use of parts of the building during night and summer classes.

Carpeting is recommended for all classroom, office and conference areas; however, consideration should be given to use sectionalized carpeting in the science and chemistry areas to permit replacement of smaller areas when damage may result from spillage. All storage areas should have an impervious acid resistant floor covering, as should the chemistry project room. The biology and physical science projects room should be carpeted.

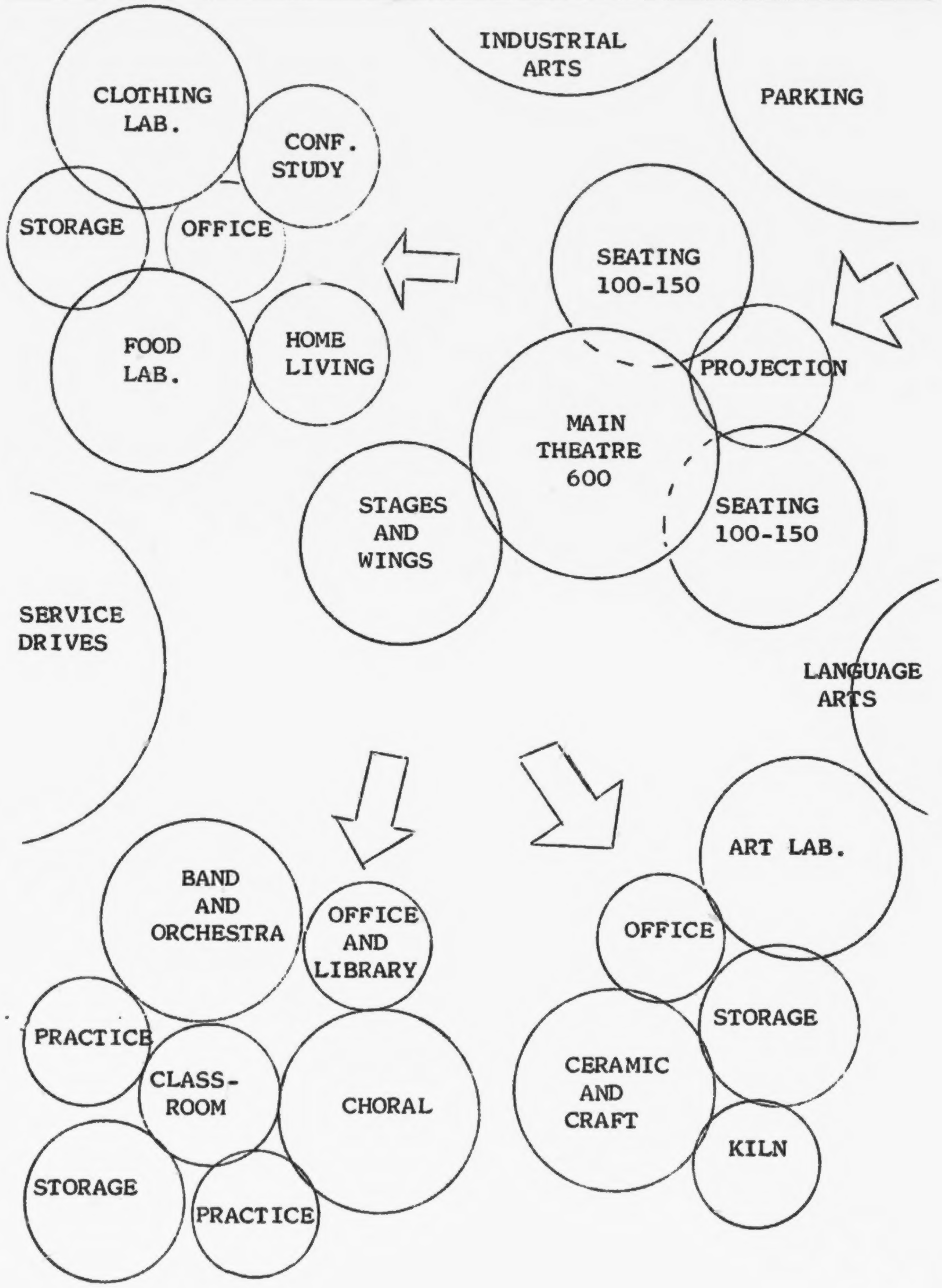
Animal and plant houses will complement the overall school facility but will be architecturally constructed to perform a particular job. Floors should be finished concrete, sloped and well drained.

The school of science and mathematics should be located with easy access to the instructional materials center and the industrial arts and agriculture department.

Suggested Physical Space Requirements

FACILITIES	AREA NECESSARY (Sq. Ft.)
One Biology Lecture-lab Room	1,200
One Chemistry Lecture-lab Room	1,200
One Physics Lecture-lab Room	1,200
One general lecture area	700
Four Math laboratories (750 each)	3,000
One Biology storage and preparation	300
One Chemistry storage and preparation	300
One Physical Science storage and preparation	300
One Biology projects room	300
One Chemistry projects room	300
One Physical Science projects room	300
One Planetarium	300
One storage for precision instruments	200
One dark room	150
Four conference areas (flexible)	600
Eight office spaces and work rooms	800
One green house	200
One animal storage	300
One (chemical) emergency shower	50
Two rest rooms	200
TOTAL	11,900

SCHOOL OF FINE AND APPLIED ARTS


INDUSTRIAL ARTS
PARKING
CLOTHING LAB.
CONF. STUDY
STORAGE
OFFICE
FOOD LAB.
HOME LIVING
SEATING 100-150
PROJECTION
MAIN THEATRE 600
STAGES AND WINGS
SEATING 100-150
SERVICE DRIVES
LANGUAGE ARTS
BAND AND ORCHESTRA
OFFICE AND LIBRARY
PRACTICE
CLASS-ROOM
CHORAL
STORAGE
PRACTICE
ART LAB.
OFFICE
STORAGE
CERAMIC AND CRAFT
KILN

APPLIED AND FINE ARTS CENTER

This model school must provide sufficient breadth of program to enable all students to gain an appreciation of the values of an aesthetic experience while providing them with the skills basic to effective daily living in our complex and dynamic society.

The Applied and Fine Arts Center should be one of the focal points of the high school plant. It will encompass the art, music, and homemaking programs, as well as providing a little theatre for school and community use.

Facilities for vocal and instrumental music are designed to accommodate a basic music program, and include large group instructional spaces, as well as ensemble and individual practice rooms with provision for adequate supervision.

Through the arts and crafts program, the needs of several aspects of the high school curriculum are fulfilled. Emphasis is placed on the development of personal skills, abilities, and talents that may lead to a future vocation or be useful in avocational pursuits.

The homemaking complex provides spaces in which the student may participate in a series of concrete experiences aimed at the development of skills and judgment in family living. Separate laboratories are necessary for foods, sewing and home living. Through the use of operable walls, these spaces can be opened up for common use of laboratory areas.

ART LABORATORY COMPLEX

In the era of a Great Society little is being done to promote interest in the fields of music and art. Larger schools over the nation offer only elective courses in art, and as a result less than ten percent of the students are enrolled. No other area of the curriculum offers more satisfaction to the learner. Reading and writing alone offers greater opportunity for self expression, but these skills are not mastered by all students.

If the deprived areas of this nation are to be educated in the aesthetics, it is necessary to require all students to enroll in introductory courses of art and drawing. Many young people who have shied away from art will find it intriguing and will continue to pursue art on an elective basis.

This is one area of the curriculum where every student, regardless of achievement level or mental ability, can express himself in a way that is meaningful.

Through the use of a large group instruction area the introductory course in art and drawing will be taught to a maximum of 75 students. This makes it possible to accommodate the entire freshman class in two class periods. All freshmen will be required to take the first semester of introduction to the basic principles of art and drawing and will be encouraged to continue in art laboratory as an elective.

Educational Objectives

1. To give each student at the high school level the experience of creative thought and making the choices that are necessarily involved in the creative experience. This promotion of independent thinking is necessary for our society's progress and will aid the entire school curriculum.

2. To help the student develop greater skill and mastery of techniques, freeing him to fully explore and experiment with many various media, tools and ideas.

3. To teach the student to apply design and be aware of it in his surrounding life and environment and to recognize the everyday choices that are unconsciously formed by color, lines, form, space, and texture.

4. To help the student more nearly realize his relationship to society today by the study of folk art and fine arts throughout history.

5. To instill in the student the desire to gather material and inspiration for his own creations, aside from the values to be gained from the total picture painted from art history.

6. To give each student problems at their own level so that they may realize personal growth and self adjustment. The advanced or talented student should be allowed to plan projects with an area of concentration that he chooses. The slower student needs more closely guided activity to find a feeling of achievement.

There will be greater coordination and integration of art with all other areas of the curriculum. The students and teachers who will work together more frequently will be grouped as neighbors in this facility. Easy access of art with indusrial arts will permit a great interchange of students, equipment, and tools. Teachers of music, literature, and art must be in constant contact with one another so that interaction can result naturally. Through this teacher interaction a seminar will be established for actively interested academic students who feel they haven't time to include the arts in their regular schedule.

This will be a learning process for the faculty as well as the students. They must return to colleges that offer courses in how to meet the problems of team teaching, but probably more important will be the in-service training of these teachers as they work together to formulate and crystalize new procedures that prove to be successful.

Enrollments and Activities

The art department enrollments will continue to climb as students become more aware of the opportunities and enjoyment afforded by it. The importance of everyone in our society holding some aesthetic ideals and a knowledge of the humanities is increasing. Even this rural area is becoming more aware; and leaders are insisting that adequate provision be made to upgrade the school program in the fine arts.

In order to meet the needs in this field this program will offer opportunities for the student to participate in drawing, painting, graphics, sculpturing and modeling along with craft activities such as stitching, weaving, batik, jewelry, metal sculpture, ceramics and stained glass. The program will also offer instruction in theater set design and building.

The early enrollment in this school will be about 200 students; however, it is expected to grow rapidly during the first three years of operation. Freshmen will be required to take one semester of introductory art. It is believed that this can be done in large group instruction, providing the facility is planned accordingly. The following is an estimate of the maximum and minimum numbers to be enrolled by the beginning of the second year:

ACTIVITY	BEGINNING	ADVANCED
Drawing and painting	160	15
Sculpturing and crafts	20	10
Ceramics	20	10

Suggested Physical Space Requirements

FACILITIES	AREA NECESSARY (Sq. Ft.)
General drawing and painting laboratory	1,500
Ceramic and craft laboratory	1,000
Storage	300
Kiln Room	100
Teachers' office and work space	150
TOTAL	3,050

It is suggested that an effort be made to arrange the two laboratories adjacent and make the space available as one common teaching area by use of a movable partition. This will provide for extra space which may be needed in large group instruction of the fine arts.

The complex must be located to provide the most effective contribution to the Applied and Fine Arts Center. An outdoor art patio is desirable. Planning should emphasize accessibility to both laboratories and the little theatre.

The fine arts laboratory should be designed to meet the needs of all kinds of drawing and painting classes. There should be no direct sun light; the ceiling should be lifted; and the interior should reflect the atmosphere of an art studio. This laboratory should be located adjacent to the general laboratory and should have direct access to the exterior circulation, storage, kiln room, and the office.

The general arts laboratory should be designed to meet the needs of instruction in a variety of craft areas. Arrangement of space and equipment will have a direct bearing on the functionality of this unit. This laboratory should be located adjacent to the fine arts laboratory and should have direct access to exterior circulation, storage, the kiln room, and the office.

The arrangement of the complex will dictate the location of the storage room. It may be possible to locate one common room with direct access from both laboratories; if not, two separate areas will suffice. Supplies and materials to be stored here are rather unique requiring a more definite understanding about facilities necessary to meet the needs.

The storage room for general supplies contains easels, drawing boards, extra weaving supplies, table looms, and extra and special kinds of paper. Some shelves can be open, but most should be dust proof. Tote trays for individual student storage of materials and work completed will be used. Oil paintings should be stored in vertical storage areas. The storage area should also include the following:

1. Portable zinc lined storage bins to roll under the counter top.
2. Two or three storage vats for moist clay storage.
3. A drying cabinet that is dust and draft free and large enough for three dimensional objects.
4. Storage for plaster bats, glazes, scales, and measures in the ceramic studio.
5. Individual storage - tote tray or lockers in the ceramic studio.
6. Tool cabinets for small hand tools in the craft room.
7. Fire proof storage for oil paint solvents.
8. Drying rack areas for work in progress that is wet.
9. Three-dimensional storage in both art spaces.
10. Storage for reference materials, matted pictures, booklets, notes, reproductions, slides, and films.
11. Paper storage with sizes ranging from 9 x 12 inches to 32 x 42 inches, and rolls of paper up to 107 inches wide.

Special Considerations

The art department will need to be carefully located to prevent interference with other programs with less noise and movement. Special attention should be given to the lighting and sound treatment provided in this complex. A specially rubberized, vinyl coated carpet should be used to permit cleaning with paint solvents.

This department will be used more by both students and adults during summer months and at nights as special classes are organized to meet the needs. Air conditioning will enhance the use of the facility during the summer.

Several display cases for ceramics and sculpture should be located throughout the school. These can be in the lobby and cafetorium or in hallways of the different schools.

The general arts studio must be located so it will encourage use from the students in industrial arts and home arts. It is impossible to over-emphasize the need for care in planning that will encourage multiple-use and the team approach in education.

MUSIC COMPLEX

There are presently no music programs in the schools of this area. Since this will be a totally new program, interest is expected to be high and the first enrollments will be generally heavy. In schools now operating good music programs approximately 35 percent of the student body participates in some phase of the music offering, and it is estimated that this degree of participation can be expected. This means that the facility should be planned to provide space for about 200 students during the first year of operation and should be expandable to provide space for as many as 400 within a few years.

General objectives include the provision of musical opportunities for exploration and expression by all students, the provision of skill areas for those interested in participation, and the provision of enrichment for gifted students. Specific objectives of vocal classes include skills and techniques of choral singing, including fundamentals of music--such as sightreading, part-singing, appreciation of music and response to it, and acquaintance with choral literature. Individual skills and talents, understanding of group work, pride in individual and group achievement, a sense of service through sharing creative experiences with the community and other members of the student body are also to be sought.

The objectives of music history and appreciation are to acquaint students with the body of literature which has been accumulating in and about music for centuries, to make students aware of the possibilities of aesthetic growth through knowing and responding to music, to look more critically at current trends in music and point to the need for some standards in choosing music and entertainment through music.

With more an appropriate space to work in and time to meet the individual needs of students, it will be possible to have more small ensembles, more individual activities, instrumental choirs and classes. With a larger number of students interested in instrumental music each year, more rehearsal space is needed in all phases of the program. A string program is anticipated to develop soon after this program is inaugurated. Automation is making standard practice of the use of tape recorders and record players located in the music rooms and independent of the school auditory system.

Activities will include concert band, marching band, wood-wind choir, brass choir, stage band, orchestra, string orchestra, instrumental classes of live instruments, individual instruction, small ensembles, classes in music theory and music history, and majorettes and other auxiliary units to the marching band.

It will be necessary for the music department to expand into the area middle-schools where the foundation can be laid to encourage participation on the high school level.

Suggested Physical Space Requirements

FACILITIES	AREA NECESSARY (Sq. Ft.)
Choral Hall	1,000
Band and Orchestra Hall	1,200
Music and Art Appreciation and History Room	700
Practice Rooms (8)	400
Teacher Office and Library	250
Instrument Storage Room	400
TOTAL	3,950

The choral hall will serve for rehearsal and instruction in vocal music. It should be equipped with radial risers and a raised ceiling to allow for space treatment to assure acoustical perfection. Sound isolation is necessary to prevent distractions and to assure that other school activities will not be disrupted by this department. The same considerations must be made in the planning of the band and orchestra hall.

The music appreciation room will be used for rehearsal of smaller choral and instrumental groups, as well as instructional space for music appreciation, music theory composition, and independent study. This room will also be shared by the art department for instruction in art appreciation and history. It should be located with convenient access from the music halls and the art department, and must be treated acoustically to afford isolation.

The practice rooms are to be located with accessibility to both the choral and band room since they will be shared by these departments. These rooms are to be used for independent work and by groups of two to four. The rooms should vary in size from 40 to 70 square feet, with at least two of the rooms large enough to use a piano and three other instruments.

The teachers' office and library should be adjacent. This space will afford conference and office space for the instructors as well as provide convenient storage for departmental music folders. Offices should be located off the large rehearsal rooms in view of the practice and ensemble rooms for student supervision.

One instrument storage room should be sufficient to meet the needs of the department. It must be equipped with proper shelving, cabinets, and cleaning and repair area. Locate with immediate accessibility from the band room and the outside practice area.

The architect should keep in mind that, although these facilities should be located as close together as possible, it is equally as important to control the sound.

LITTLE THEATRE

It has previously been pointed out that there is no form of cultural development within the area to be served by this model school. There is not a movie house or an auditorium anywhere in the area. The little theatre complex must serve a dual purpose to meet the needs of both the school and the community.

The little theatre will serve as a large group lecture hall, helping to promote effective team teaching in each of the different disciplines. By careful planning the area can be made divisible through the use of folding partitions making one large and two medium lecture halls available.

This complex will be used by the student government, teachers and administration to present assemblies and concerts which are a part of the regular school program. It will also be used by the school and community to stage a summer play house. Professional theatre groups and professional musical entertainment will be presented as a means of developing appreciation for the aesthetics.

The community will use the complex as an auditorium to meet the needs of civic and governmental functions.

The location of the little theatre should be strategic with reference to the departments and agencies who will use it most. The language arts and social studies people will use it often for large group presentations, as will the other schools. The music and art departments will take advantage of the stage for practice and the entire unit for presentations. Community use will be frequent. Taking all of the uses into consideration it will be advisable to

1. Relate the structure to the exterior of the school plant with easy access from the public traffic and parking area.
2. Relate the backstage area to the art and music laboratories and provide easy accessibility between the two units.
3. Locate in close relationship to the language arts and social studies complex.
4. Locate the entire unit as near the center of the total school complex as is possible. Only the instructional materials center should be more centrally located.

Suggested Physical Space Requirements

FACILITIES	AREA NECESSARY (Sq. Ft.)
General Seating - Main Theatre	9,000
Unit capacity 900 seats	
Projection Booth	100
Stage and Wings	2,000
Scene and Paint Shop, Drama Classroom	500
Property Storage	150
TOTAL	11,750

The general seating in the main area should be arranged in a semi-circular form around the stage and should provide great flexibility for experimental productions. There should be direct access to the backstage without crossing stage aprons. Consideration should be given to the use of dividers which will make multiple use of this area possible.

The stage and wings should be designed for standard little theatre production, as well as experimental productions. Design should eliminate permanent proscenium walls, since anything permanent limits the use of the stage and restricts the size of the usable area. Curtain, back-drop, and light arrangement should be completed only after council and advice from resource people with direct knowledge of specific needs.

The projection booth can be provided in the back of the theatre and over the entrance way to preserve space. It should be equipped with a 35mm projector and a 16mm projector with lense appropriate for the distance involved. Provision should also be made for all light and sound controls to operate out of the projection booth. A quality screen with dimensions of 12 by 18 feet should be available in the stage area.

The scene and paint shop will also double as a drama classroom when needed. It will be used for stagecraft instruction and as a place to build and store scenery. This unit must have direct access to the stage and property room and an exterior access to a vehicular drive.

The property room will act as storage for electrical and lighting effects equipment, necessary cleaning equipment, as well as stage equipment and small props.

HOME ECONOMICS

Home Economics education at the high school level has as its purpose preparation for basic vocation in American life. Homemaking is not a series of easy tasks of sewing and cooking, but rather a way of life upon which many demands are made perplexing, complex, and intangible at times. In order to prepare pupils to live in an ever-changing society, they must be exposed to methods of home management, wise spending, providing foods, shelter and clothing and keeping the family well and happy. As social patterns and cultures change, so does home life. Today, society expects the family to develop personality, individual security, personal values, cultural patterns, respect for self, and respect for the rights of others. As families try to meet these responsibilities there is a great concern regarding family status and future. Some of the reasons for such concern are high divorce rates, early and frequently unwise marriages, increases in illegitimacy, high percentage of mothers working outside the home, neglected children, high incidence of migration resulting in a rootless way of life, unemployment and unemployability, competition for family attention in interest outside the home, and increases in the number of mentally disturbed and mentally ill. If the family is to maintain an important place in our changing world, the importance of preparation for the creation of homemaking must not be neglected. Home-makers today should be intelligent, well-informed citizens; and home economics education classes give the basic principles for this all important vocation.

Educational Outcomes

The Home Economics Department of the Salem Model School will endeavor to assist students as family members in developing attitudes, appreciations, understandings, and abilities for their personal, family, community and employment life. Students will be given opportunities to become effective consumers of food, clothing, housing, and other goods and services. Students, as family members and future family heads, will be developed into constructive and creative citizens. Each individual student will be given motivation to carry out intelligent decisions concerning the use of human and material resources. The teachers will work with the guidance counselors in securing and interpreting materials and information that will encourage home economics careers.

Discernible Trends

New and changing concepts in the home economics program will be closely related to important socio-economic changes occurring in Arkansas and the nation. Some of the changes which affect home and family living include the shift in population from rural to suburban areas; a shorter work week resulting in more leisure for family members; an increase in the rate of earlier marriages; further developments in technology, bringing automation into the home; increased number of women employed outside the home; the impact of other emphasis in education such as mathematics, science, and languages.

The present discernible trends in home economics education include a greater emphasis on research, rapidly changing equipment, both with respect to kind and design, more curricular emphasis on family living, care of children and money management, less curricular emphasis on garment construction and cooking with raw materials, and adaptation of the curriculum in foods to community trends in food consumption.

Home Economics Education will be influenced by the Perkins Vocational Act of 1963. In the past the curriculum has been primarily concerned with families, family living, and preparation for home-making. In addition to these objectives it will now be concerned with developing those skills for which there are employment opportunities--for example, day care center, hospital, restaurants or hotels and various other public services. Since we are going into wage earning occupations, the number of pupils per teacher will be decreased so that she can give on-the-job supervision.

The facilities of the home economics department will be used by many age groups. There will be the full time high school students, adults, and those people who have previously dropped out of school. The facilities will be used year around to offer summer classes in almost any area of homemaking to the public. Facilities for each group should be provided in the homemaking department.

Activities

In each instructional area there will be numerous types and kinds of learning activities. The teaching of home economics involves both direct and vicarious learning experiences for pupils, which are provided through a variety of methods, materials, and media. Included in the teaching-learning process are demonstrations, large group and round-table discussions and role playing, independent study, team teaching, observation and work with younger children. Projects involving the use of varied equipment, materials and products and the use of overhead, opaque, and filmstrip projectors, tape recorders, teaching machines, charts, books, models and pamphlets will be important. Specific activities unique to the homemaking department and, therefore, requiring consideration by the architect will be those normally carried on in the home. These will include such activities as the preparation and serving of foods, home cleaning, home decoration, child care, clothing construction, clothing care, laundering, consumer education, and home care of the sick. This list of activities is not exhaustive but only specific enough to indicate the wide variety of facilities and curricular materials for the home economics program.

Enrollments

The anticipated enrollment in home economics in a particular year will be approximately 200 to 225 students in grades 9 through 12. This number of students will require three full-time teachers. With the possibility of wage earning occupational training, the number of teachers would possibly need to be increased to four.

Presently, as many as 30 students are enrolled in a course in high school instruction in Arkansas schools. It is recommended that this number be reduced in this model situation to not more than 20 and that the general laboratory stations be constructed for the instruction of a class of this number. It is generally agreed by home economics authorities that 20 should be the maximum class enrollment in laboratory classes. The minimum of students to be enrolled in any one regular laboratory class would be 15 students. However, students interested in study in depth can elect phase four subjects in smaller groups or on an individual basis with a teacher by appointment. At least three small conference rooms should be included in the complex for use by students participating in independent study.

Suggested Physical Space Requirements

Space and facilities play a significant part in the teaching and learning of home economics. Amount, type and arrangement of space, equipment and furnishings for any homemaking center are related directly to the philosophy and purposes of home economics education and the program to be provided.

FACILITIES	AREA NECESSARY (Sq. Ft.)
Food Laboratory	1,400
Clothing Laboratory	1,300
Home Living Area	600
Conference and Independent Study Areas (3)	300
Teacher Office	120
Storage and Rest Room	175
TOTAL	3,895

Furniture and Equipment

By the very nature of the activities, the home economics department has many items of furniture and equipment which will affect the teaching spaces. Among those are electric ranges as well as refrigerators with freezer space. Double sinks, dishwasher and food disposal units are also needed. Automatic washer and dryer and serving machines in adequate numbers should be provided. Wardrobe cabinets for garment storage are needed. Tote trays and cabinets should be provided for individual student storage. A personal grooming unit with long mirror and counter is a necessity. A single bed with springs and mattress needs to be provided in addition to a variety of living room furniture. A complete set of dining room furniture should be included as a part of the equipment in the food laboratory.

Special Requirements

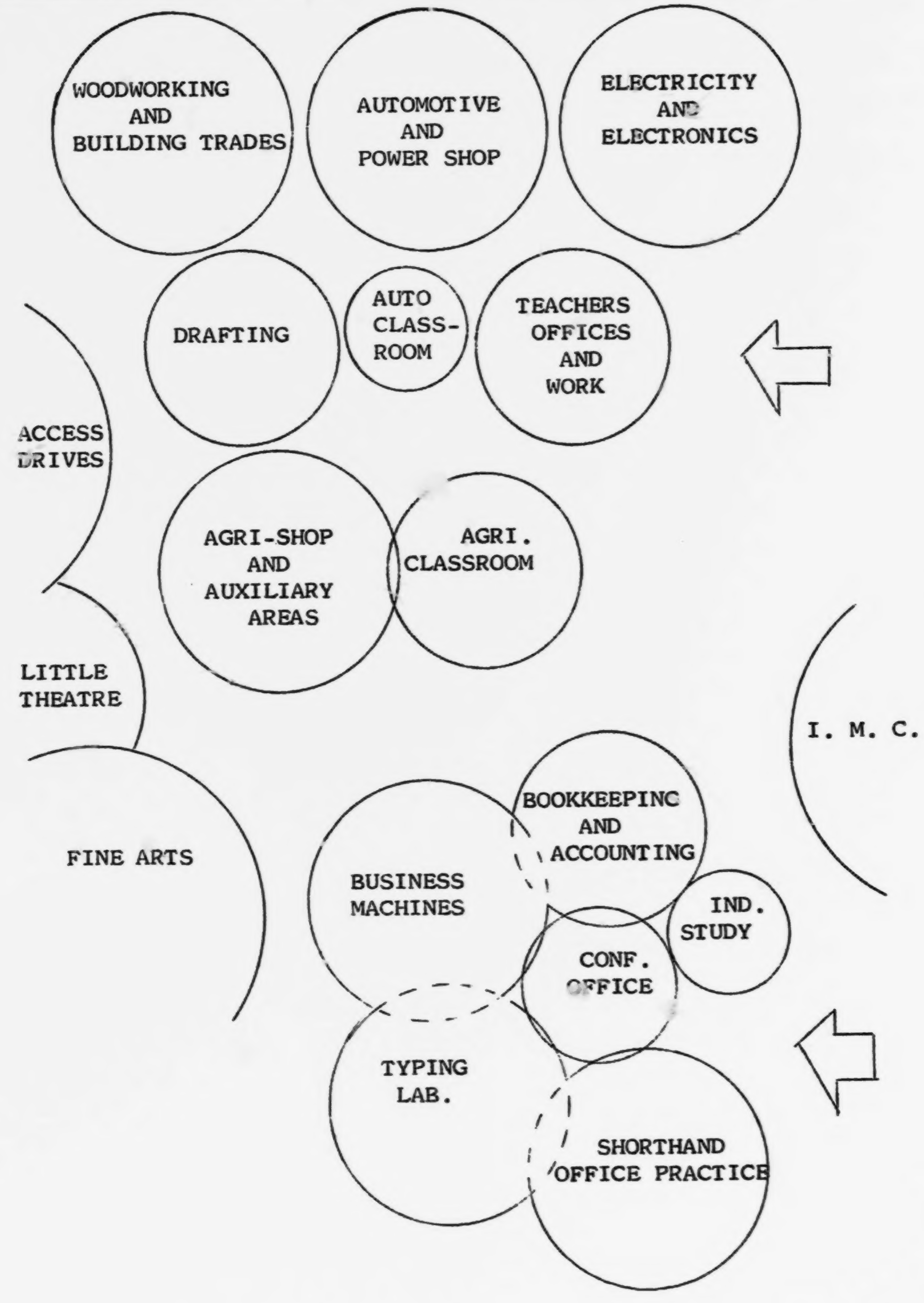
There should be hot and cold water in each classroom. Each laboratory should have a wash basin for washing hands. There must be adequate electric wiring and electric outlets every few feet in both laboratories. The multi-purpose rooms will need extra wiring for all of the small electric appliances used. If windows are used, screens should be provided for the food laboratory. Range hood and exhaust used should be considered in relation to the placement of these appliances. Other special requirements for electrical wiring should include the following:

1. Lighting for general and specific work areas to provide a minimum of 150 foot candles for close work and about 75 foot candles for general work.
2. Plug-in appliances adequate for classes of up to 20 students.
3. Major appliances adequate for stoves, refrigerators, washers, roasters, sewing machines, clothes dryers, and hair dryers.
4. Spare circuits for possible future additions of items such as electronic ovens and dry cleaning equipment.
5. Electric outlets in the wall and floor for portable equipment.

Doors should be large enough to facilitate the movement in and out of major pieces of equipment and appliances in case of need for repair or replacement.

Plastic counters for kitchen cabinets and all other related types of work surfaces should be provided for ease of care and sanitation, and acceptable floor tiling for laboratory kitchen areas could be used with carpeting desirable for other areas. Year around use of this facility will necessitate climatic conditioning, with each laboratory on a separate circuit and independently operated.

VOCATIONAL CENTER


WOODWORKING AND BUILDING TRADES
AUTOMOTIVE AND POWER SHOP
ELECTRICITY AND ELECTRONICS
DRAFTING
AUTO CLASS-ROOM
TEACHERS OFFICES AND WORK
ACCESS DRIVES
AGRI-SHOP AND AUXILIARY AREAS
AGRI. CLASSROOM
LITTLE THEATRE
I. M. C.
FINE ARTS
BOOKKEEPING AND ACCOUNTING
BUSINESS MACHINES
IND. STUDY
CONF. OFFICE
TYPING LAB.
SHORTHAND OFFICE PRACTICE

VOCATIONAL CENTER

A comprehensive study has been made in this area to determine the needs in vocational education for both graduates and dropouts. Two surveys have been made, one of graduates and one of dropouts, which give conclusive evidence that offerings in the vocational fields must be broadened if these needs are to be met.

Questionaires were mailed to a random sample of the Salem graduates who finished high school between 1950 and 1965. Out of 100 graduates 33 made a reply to this questionaire. The same questionaire was administered to the class of 1966 one week before graduation, with the entire class of 41 present and participating. The questionaire was also answered by 19 of 35 dropouts known to be living in the area as of July, 1966.

The primary aim of the questionaire was to determine what areas of the curriculum are considered to be weak and what subjects should be added to meet the needs of both graduates and dropouts.

Subjects not offered in any of the schools of this area and listed as necessary additions to meet the needs of those who replied are given below. A weighting process was used by assigning to subjects listed as: first choice equals three, second choice equals two, and third choice equals one.

DROPOUTS	19 MADE REPLIES
Subject	Weighted Values
Practical Nursing	16
Auto Mechanics	14
Building Trades	14
Secretarial Training	9
Welding	9

1966 GRADUATES	41 MADE REPLIES
Subject	Weighted Values
Computer Training	33
Secretarial Training	32
Electronics and Electricity	32
Data Processing	28
Building Trades	14
Drafting and Design	13
Auto Mechanics	13

GRADUATES 1950 TO 1965	33 MADE REPLIES
Subject	Weighted Values
Secretarial Training	39
Data Processing	28
Computer Training	25
Drafting and Design	15
Building Trades	12
Mechanics	7

One indication was made through the evaluation of the questionaires submitted by the dropouts. About 92 percent of those who dropped out would have probably remained in school if they could have followed a vocationally oriented curriculum.

The need for improvement in the basic subjects, language arts, social studies, mathematics, and science has been the major concern in this model plan. Their importance has not been, and cannot be, over emphasized. However, it must be pointed out that subjects in the vocational and applied arts fields are of paramount importance to students with low economic backgrounds and a tendency to either drop out of school or terminate their education at the time of graduation from high school.

The vocational departments must be carefully planned with maximum flexibility. It may soon be necessary to teach skills that are today unknown.

The continued expansion of the American system of free enterprise is dependent upon a citizenry possessing a high degree of economic understanding. While increasingly larger percentages of our boys and girls start a college career, secondary education is still the last formal training that a number ever receive. If citizens are to become effective producers and consumers of economic goods and services, it is imperative that students at the high school level receive some formal education in the area of business.

This center must be designed to provide special as well as general classroom facilities for the instruction of business education. Several possible trends in teaching methodology and techniques have affected the physical environment required by these disciplines. The use of more electric and electronic machines, including electric typewriters, office machines, accounting machines, and computers has created a demand for more specialized spaces. Learning in this discipline is facilitated if a student not only sees and hears what the teacher does but also participates in a variety of learning activities. Some of these activities include individual projects, part of which may involve independent research, collection of data, computational problems requiring the use of a desk calculator, production work with mimeograph and other type duplicators, as well as development of skills in accounting techniques and typing.

It should be further emphasized that the present day society is essentially industrial in nature; therefore, the role of industrial arts and related subjects occupy an important place in the educational structure. Industrial arts education as a whole should be as much a process of shaping social outlook as anything else. As a part of the total educational program which provides opportunity for the study of man and industry through participation in typical experiences in industrial processes and techniques, industrial arts enriches other instructional fields such as mathematics, science, and language arts by bringing theory and practice closer together.

This center provides the necessary facilities for students to acquire basic knowledge and skills in using machine and hand tools and interpreting instructions and drawings. These shops and related educational facilities should be designed for easy adaptability to future changes in shop organization and curriculum requirements. Such changes may well require changes in the way students are grouped, in the way students are taught, in the content of instruction, and in the equipment required to support instruction. The shops should be large open areas, leaving the center area as free as possible of fixed installations, so that they can be altered without undue expense or effort when the changing curriculum demands a new physical environment.

BUSINESS EDUCATION

Business education has been partially defined as an education that orients the pupil to the world in which he lives and that assists him to acquire the attitudes, knowledge, skills, and understandings that will enable him to live happily, responsibly, and usefully in the world. This Model Business Education Department will plan the child's program on the basis of his physical, vocational, social, emotional, mental, and spiritual needs. It must endeavor to satisfy his individual interests and purposes and at the same time cultivate common interests and purposes at all levels of ability.

Good business education has all the objectives of good general education, with one point of difference. It has as one of its major aims the development of occupational competency. Equally important is its responsibility to provide the knowledge, attitudes, and non-vocational skills needed by all persons to be effective in their personal economics and in their understanding of our economic system.

It is the intent of this business education department to encourage coordination between the various fields of vocational education as well as the vocational education department and other subject matter areas of instruction to enable an understanding and appreciation of the relationships that exist.

Educational Outcomes

In order to carry out this philosophy of business education, several objectives must be met. Certainly the personal needs and vocational aims of the student must be met. Students, then, should be guided into the vocational and general business subjects on the basis of their interests and abilities. Through these subjects, we are determined to provide the knowledge, attitudes, and non-vocational skills needed by students at all levels of ability to be effective in their daily lives. College bound students should be given opportunities to take business subjects in order that they may pursue them in institutions of higher learning. Planned for, also, is the provision of remedial training for students who do not meet the minimum essentials for employment. It will always be an endeavor to develop the students' occupational competency by preparing them for initial employment and providing a background for advancement. Finally, we must provide long range planning for periodic evaluation through pupil follow-up and business community surveys.

Discernible Trends

Generally the expansion of the business world techniques is dictating an expansion of the business education program. There is an increased use of machines and automation in the business community, which necessitates a more flexible and intensive business training program. These general trends lead to some specific trends in subject matter and techniques.

Social business, the instruction in personal typing, general business and business mathematics is thought to be important for all students. The machine and automation expansion necessitates the teaching of business machines such as key punching machine computers, calculators and duplicators. The teaching spaces must be made flexible by the use of operable walls and movable furniture in order that flexible scheduling of students may be accomplished. The use of glass walls between areas will permit teachers to have visual supervision over students doing independent study and practice. Classrooms must be designed to permit large group instruction and instructors must be provided with adequate assistance and appropriate audio-visual teaching aids necessary to carry out advanced techniques of teaching. The full utilization of all business machines will be accomplished through provision for an adult education program which will run as evening, Saturday, and summer courses according to needs and demand.

Activities

Business education lends itself to a variety of ways of instruction. Large group instruction with lectures and demonstrations can profitably be used as can small group instruction if the teaching spaces are constructed in the correct manner.

Several of the schools in Florida and other states are following a plan advocated by the Melbourne High School in

Florida and its principal B. Frank Brown. Classes with as many as 100 students are being taught in typing and shorthand. Dr. Brown in his book The Appropriate Placement School wrote:

> Typing is a prime example of a skill subject well suited to large group instruction. To teach typing in anything but a large group is both inefficient and uneconomical. Since the process by which one learns to type consists entirely of mastering a finger dexterity skill, adroiteness in this craft must be self-learned. The process is composed of about ninety five percent practice with no more than five percent instruction.
>
> In large schools the minimum size of typing classes should be 100 students. There is no maximum. Since instructional presentation is minimal in this subject, five classes consisting of a hundred and fifty students to the class is not an excessive load for a typing teacher. Whenever the structure of a subject requires abbreviated instruction, the class should be reorganized so that one teacher can direct a large number of students. The visible presence of the teacher every moment is unnecessary in typing classes. Well executed instructions and occasional monitoring will suffice....
>
> Another subject which may be efficiently taught to large groups by one teacher is shorthand. The learning of shorthand comprises a mixture of listening, writing and typing. This knack is best learned in an electromechanical laboratory equipped with tape recorders and earphones. Through these devices each student is able to listen, take dictation, and transcribe at his own rate. The recommended minimum class size; again 100 students.[1]

Schools with smaller enrollments, such as this Model School will have, cannot expect to have classes with as many as 100 students because of scheduling problems. However, teachers can teach multiple classes if the facility is planned to permit visual supervision between certain rooms. For example, a teacher can teach a typing class and a shorthand class during the same period, with adequate time to supervise in both. Or, she can run a typing or shorthand class and supervise a small independent group study in one of the other areas of business education.

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[1] New York, 1965, pp. 119-120.

Informal group and panel discussions are contemplated as well as use of community and business resource persons. Visual presentations in all areas will be used-i.e., films, film strips, recordings, and tapes. Of course, teacher demonstrations with immediate student practice will be employed. A tape deck, controlled readers, and turntables with earphone hook-ups are anticipated to provide for individual differences. This necessitates a suggested area for classes with from one to ten students.

Enrollments

In planning for an enrollment of 635 students the following predictions are made for the business department:

SUBJECT	NUMBER OF STUDENTS
Typing	145
Shorthand	50
Bookkeeping	50
General Business, Law and Math	40
Office Practice	30
Economics	30
Business Machines	20
TOTAL	365

Several students are expected to elect to do advanced work in the business department, while many others will attempt to take as many of the courses in this field as is possible to work into their schedule. This will result in several sections of small group and individual study. Teachers will work as a team and provide for the additional supervision by teaching multiple classes part of the time.

Suggested Physical Space Requirements

The following spaces are recommended to house the business education department:

FACILITIES	AREA NECESSARY (Sq. Ft.)
Typing Laboratory	1,200
Business Machine Laboratory	1,000
Shorthand and Office Practice Room	1,000
Bookkeeping and Accounting Room	1,000
Office, Conference and Console Room	500
Independent Study Laboratory	200
TOTAL	4,900

The typing and business machine rooms should be adjacent with a folding partition and a total area of 2,200 square feet. The typing room should also be related to the shorthand and office practice room by use of a glass partition. These two rooms should be related to each other by a row of cabinets with a counter top extending into each classroom. The glass partition should rest in the center of the cabinet and extend upward a minimum of four feet to allow visual control of both rooms.

The business machine laboratory should be related to the bookkeeping and accounting room by use of a cabinet with counter top extending into both rooms. The partition between these rooms should be glass to allow visual supervision between the two facilities.

The office, conference, and console room should be centrally located with glass partitions allowing visibility from the unit to all classrooms.

One independent study laboratory should be related to the office area. This unit should be wired to the console and be equipped so students can practice on different machines that can be portable.

There should be a built-in overhead projector at the teaching station in the bookkeeping department. All furniture must be selected to meet the needs of additional work space in each of these areas.

The business center should be related to the exterior of the physical plant with convenient access to vehicular service road for ease of pick up and delivery of new and repaired machines.

Furniture and Equipment

The furniture and equipment discussed herein will be only that which will appreciably affect the spaces.

Typing: It is recommended that cabinets and storage spaces be provided along the glass wall and that a counter top which should run the length of the room be provided as well. Electricity must be provided at each station for the use of electric machines. A controlled reader and the necessary screen should be provided for.

Business Machines: It is recommended that cabinets and storage spaces be provided along the glass wall and that a counter top which should run the length of the room be provided also. The use of large amounts of paper and duplicating supplies will require additional storage areas in relationship to the machines. Attention must be given to the need for electric outlets at each station.

Shorthand and Office Practice: This unit will share the wall unit with the typing room. Additional storage and filing cabinets will be needed in the office practice area. Each station must be equipped with head phones connected directly with the console in the console room. Provision should be made for use of projection equipment.

Bookkeeping and Accounting: This unit will share the window wall unit for storage purposes. Two additional filing cabinets will be necessary for storage of practice sets and other materials. A built-in overhead projector should be installed along with a permanent screen. Electrical outlets should be provided at each station to facilitate the use of calculators in accounting.

Office and Console Room: This space should be arranged to permit privacy in the office area where six filing cabinets and a storage closet will facilitate storage of test materials and other private papers and supplies. The outer part of the unit will be equipped with a console that will permit instruction of several different students at different levels and at different speeds. Furniture should also allow for conferences and independent study in this unit.

Special Requirements

A wash basin with hot and cold water, soap dispenser, paper towel dispenser, supply cabinet below sink, and mirror should be accessible to each of the four main laboratories. Lighting must be adequate for intensive work in each area. Since noise of the machines will be somewhat of a problem, it is recommended that careful consideration be given to the acoustical treatment of wall spaces. Carpeting and year round air conditioning with individual room control is also recommended.

Since no large area lecture room is possible in this unit without excessive cost of construction, it is recommended that the unit be located with ease of accessibility to the little theatre where multiple use of the lecture rooms can be utilized.

VOCATIONAL AGRICULTURE

Vocational agriculture can and should be a vital phase of the comprehensive high school; agriculture is one of Arkansas's basic industries. The program of studies related to vocational agriculture should enable all those persons who can profit from such training to develop proficiency in farming. This instruction is designed to meet the needs of those persons planning to farm or who will be engaged in related occupations. The program of vocational agriculture is, of necessity, a joint effort of local, state, and federal agencies. This program is carried out locally but is operated within the framework of state plans and requirements.

Educational Objectives

General objectives of vocational education in agriculture and related agricultural occupations that must be attained to proficiency in farming are as follows:

1. To provide instruction which will enable the student to gain basic understanding of agriculture including agricultural production and management, scientific concepts that support agriculture, agricultural aspects of related occupations and agricultural processing distribution and services.

2. To develop in students the understandings, abilities and attitudes needed to appreciate the importance of agriculture to our national welfare, make a beginning and advance in farming or in an agricultural occupation which requires experience and competence in farming, and apply the principle of science, management, economics, and mechanics to the efficient production and marketing of farm products.

3. To develop abilities necessary to become established in farming for those students who have chosen this as their vocation.

4. To gain proficiencies that will enable students to enter related occupations and to make intelligent occupational choices.

5. To provide the students with worthwhile guidance activities that will enable them to make intelligent occupational choice or to pursue advanced college training.

6. To develop those abilities, skills, and attitudes needed for successful and aggressive participation in citizenship and rural leadership activities.

Discernible Trends

With a much smaller percentage of the total population engaged in farming than was formerly the case, there is a notable trend for a number of high school boys who do not plan to become farmers to take vocational agriculture. These boys take vocational agriculture with the realization that there are many other vocations in which training in agriculture is either necessary or very helpful. People in these related vocations serve farm people in some way. These occupations related to farming have come to be known as "agri-business" and include agricultural businesses of many kinds, in which more people now work than there are people who are engaged in farming. Agri-business not only is becoming increasingly important as an area of study in high schools but is also important in institutions of higher learning as well. Most state universities now offer agri-business as a distinct and separate field of study and offer a degree in this particular area. This increased emphasis on agri-business requires a revision of the vocational agriculture program of study in that there is a need for some training in these various occupations related to farming.

Enrollments

It is anticipated that the Salem Model School will make agriculture available to about 145 students. There is also a probability that agriculture will be offered to adults in the evening with a maximum of 12 students per class.

Activities

In addition to regular classroom activities a variety of activities will transpire in and around the agriculture shop. The following activities are planned: beginning shop instruction; shaping and fitting cold metal; working with form concrete and concrete masonry; electric wiring and fusing; servicing and repair of small gasoline engines; using handworking tools; painting and finishing; plumbing and irrigation; operating, servicing and repairing power machines; shaping and fitting sheet metal; sketching and drawing; tool sharpening and design; and welding, both arc and oxyacetylene.

Suggested Physical Space Requirements

FACILITIES	AREA NECESSARY (Sq. Ft.)
Classroom	850
Shop	2,400
Projects Laboratory	200
Storage	300
Wash and Locker Room	200
Office and Conference Room	100
TOTAL	4,050

The classroom should be designed to use the latest technical techniques in teaching and be wired for use of all electronic equipment available to other regular classrooms.

The shop area must receive special consideration in design to assure proper placement of each of thirteen basic shop areas which are:

Cold Metal
Concrete
Electricity
Gasoline Engine
Handworking
Painting and Finishing
Plumbing and Irrigation
Power Machines (Woodworking)
Sheet Metal
Sketching and Drawing
Tool Sharpening and Design
Welding (Arc)
Welding (Oxyacetylent)

It will be advantageous to separate the metal and wood working areas. Each area should be planned to accommodate two students working together and will vary in size according to the activity and type of equipment necessary. Consideration should be given to space needed to handle supplies such as long pipe in plumbing and boards in woodworking.

Each basic area will have a seven foot work bench with a tool storage cabinet located above the bench. Tools and equipment necessary to teach the skill will be located within each area. No central tool storage area will be necessary. Any odd tools or equipment will be stored in a general storage area.

The basic shop areas should be located around the wall leaving as much open space in the center as possible for activities which require more room. Specific requirements for tables, cabinets, and coded color scheme will be furnished as a supplement to these specifications.

If windows are used, they should be located above the six foot level to prevent distractions, and they must be planned not to interfere with the placement of tool storage cabinets on the wall over each area work bench.

Lighting should be planned to meet the needs of shop work, some of which requires good lighting for close work. Heating and other environmental factors should be planned to meet the greatest needs of a shop environment.

The classroom and shop area should be separated by placing the auxiliary spaces between them.

A projects room with approximately 200 square feet will serve as home base for students with special projects which require space over a given length of time to complete.

The storage room should be long and narrow to facilitate storage of pipe and boards. Double doors will permit portable storage racks to roll in and out of the area.

A wash room with 28 lockers (full length) will permit changes into shop clothes for laboratory work.

The office should be located so it will give teachers full visual control for supervision purposes.

Space Relationships

Vocational agriculture should be located away from the general academic instructional area but not separated from the rest of the building. It is recommended that industrial arts be adjacent to vocational agriculture to facilitate cooperative use of facilities.

Accessibility to the vocational agriculture complex is required for adult classes which will be taught at night.

This complex should also be near the outdoor science classroom (about one acre under fence) for laboratory purpose.

INDUSTRIAL ARTS

Planning the industrial arts facilities must have as its base the major objectives of the individual school and school system. The proposed industrial arts program in these educational specifications is designed to meet the needs of the youth and adults of the Fulton County area in north Arkansas. It is realized that many of the youth educated in this area will migrate to other parts of the nation; therefore, some consideration has been made for broad preparation in fields not common or at least in small demand in this immediate area.

Educational Objectives

Industrial education has an important function as a combination of general education for all and prevocation education for students who plan to enter industrial occupations. Consideration has been given to the individual differences in physical maturity, intelligence, interests and social and economic back grounds among secondary pupils. The proposed curriculum has been developed to offer a wide choice to the student in selecting a program that best suits his own needs and opportunity to proceed in his chosen program at a rate commensurate with his own ability.

The educational objectives of the proposed Salem Model High School are:

1. To provide familiarity with control and practice in operation of common tools, machines and mechanisms

normally encountered by people in our society.

2. To develop knowledge and skills through practice of maintenance and repair procedures required on machines, mechanisms, and devices owned by most people as preparation for employment.
3. To develop knowledge and skills through practice in operation of some of the basic machines, tools, and devices common to some basic industries or production facilities, as preparation for potential employment as apprentice operators.
4. To develop a basic knowledge of common manufacturing processes, practices, and materials through study and experimentation by those who intend to extend their education beyond high school in fields directly associated with modern industry.
5. To provide a methodology of instruction which involves such principles as independent student choice, group cooperation on large projects and working with a great variety of modern industrial materials.

Discernible Trends

Trends in industrial arts which will affect the industrial arts program include continuing and accelerating technological change in industry which will make it necessary to familiarize students with modern tools and machinery. The national interest in providing an adequately prepared working force, particularly in engineering and the sciences, may lead to an increase in the difficulty of getting the more able students to enroll in industrial arts courses. Therefore, it will become necessary to make adjustment in the industrial arts program to make it more challenging and more beneficial to the academically talented student; as secondary schools become larger and more comprehensive, advanced industrial arts offerings at the senior high school level will experience further growth and development.

Adult education, both for general and for vocational purposes, will continue to expand. There appears in the offing increased emphasis upon the organization and processes of industry; diminishing emphasis on the wood shop; an increasing emphasis on the technical fields such as electricity, electronics, radio, and television and those engaged in the use of plastics and ceramics.

Present day and anticipated use of automation procedures, plastics, ceramics, wood, and metals in industrial manufacturing dictates that persons concerned in these manufacturing processes or maintenance of the machines for production, maintenance of the finished product, or intelligent use of finished products be familiar with the materials used in the product as well as the manufacturing process itself.

Activities and Enrollments

Activities in the industrial arts program will be quite varied. The proposed industrial arts facilities should provide for instruction and student activity in mechanical drawing, architectural drawing, design, ceramics, plastics, leathercraft, automobile mechanics, small gasoline motors, art metals, woodworking, electricity, radio and electronics, and home appliance repair. Activities will include group lecture and demonstrations, group projects, and independent work and study.

In addition to such activities as those listed above, from time to time students from the fine arts and home economics departments will utilize woodworking, drawing, and electricity facilities.

Specifically, activities within each proposed educational space are as follows:

1. Drafting room. This room would be used for basic and advanced courses in mechanical drawing, architectural drawing, design and planning.

2. Wood Shop. General shop plan would include basic exploratory courses in wood, leather, art metals and plastics. It would also be used for more advanced type courses covering these same subjects and same facilities would follow more closely the unit shop plan. These facilities would also be used at times by the home economics and fine art departments.

3. Electricity and Electronics. This room would be used for basic courses in electricity and radio as well as courses in home repair of small appliances.

4. Automotive Shop. This will be used to teach the basic fundamentals of automobile and small engine repair.

5. Building Trades. A course to be known as Building Trades will be taught by using each of the above shops as needed, depending upon the stage of construction. A house will be built from planning to completion and sold to the public at cost. This living laboratory can be repeated as often as a project is needed.

The recommended minimum and maximum number of students participating in each class should be from 10 to 20 pupils. Anticipated minimum and maximum enrollments of the industrial arts department range from 150 to 225 pupils. Anticipated minimum enrollments in each subject is given in detail in the section on Program.

Suggested Physical Space Requirements

In order to accommodate the activities and attain the objectives listed above, the following spaces within the industrial arts complex are suggested:

FACILITIES	AREA NECESSARY (Sq. Ft.)
Drafting Room	1,000
Drafting Storage and Model Making Room	300
Wood Shop and Building Trades	2,000
Storage	200
Finishing Room	250
Electronics and Radio	1,200
Storage	150
Automotive Power Shop	1,500
Storage	150
Classroom (flexible)	800
Teachers' Work and Office Area (4)	400
TOTAL	7,950

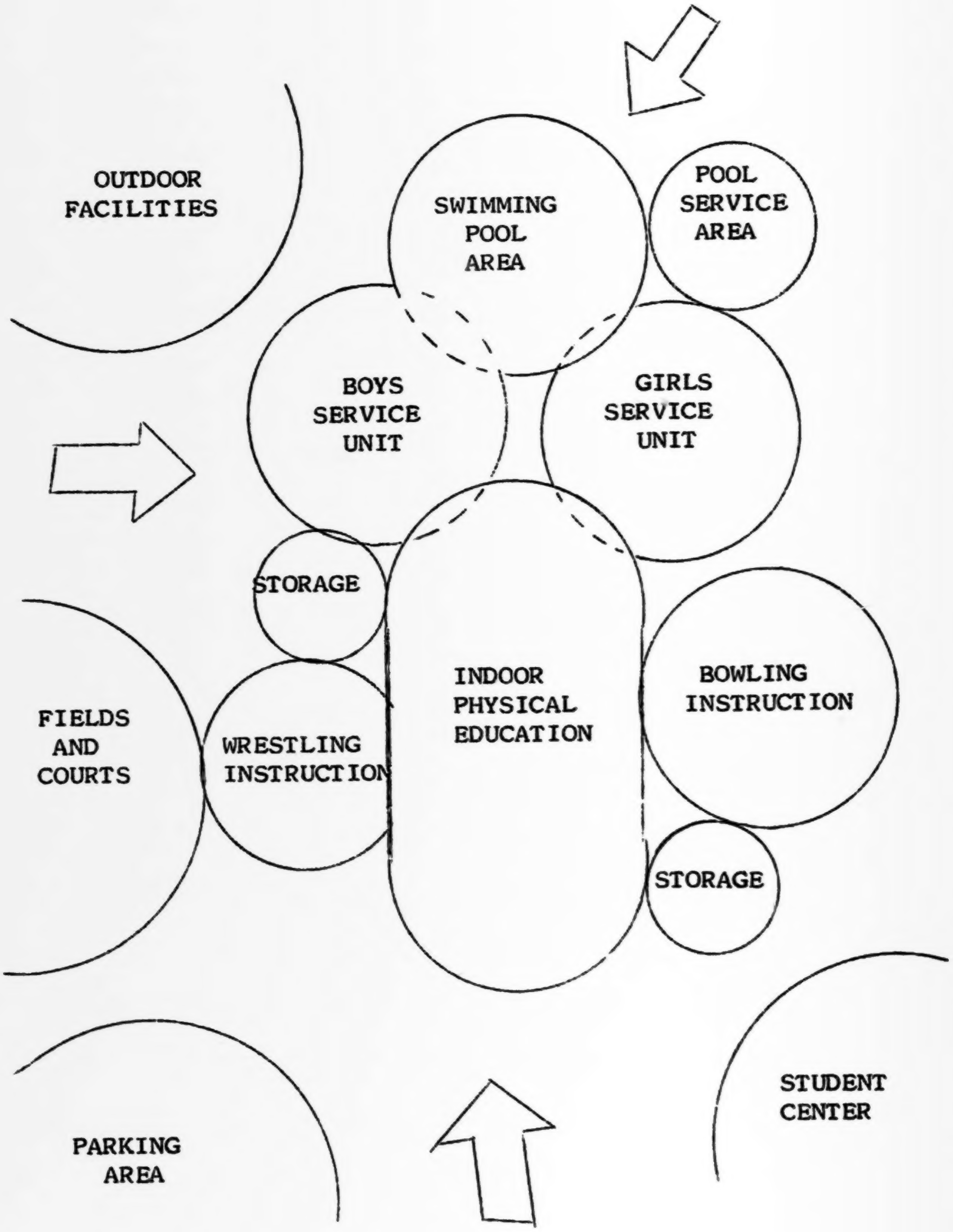
The industrial arts department should relate to the exterior of the physical plant with access to service roads for delivery of materials and supplies. It should also be directly related to the Agriculture Department, the Home Economics, and Fine Arts Departments since there will be multiple use of the shop areas by each of these departments.

One classroom with approximately 800 square feet of area and a folding wall should afford adequate common classroom space. This room should be accessible to each of the shop areas and the office area and should be treated as other classrooms throughout the school assuring proper light, weather conditioning, and aesthetic enhancement.

The industrial arts complex should be accessible to the little theatre for use of the large lecture rooms there since it is not to be afforded in the shop area.

Instructional areas within this unit should be separated by walls which have been acoustically treated. Ceilings will vary in height according to the activity, and shop arrangements will depend upon the activity and materials to be used for demonstration and project purposes. A detailed list of tools and machines requiring unique wiring and plumbing will be furnished prior to the making of the working drawings.

PHYSICAL EDUCATION CENTER


OUTDOOR FACILITIES
SWIMMING POOL AREA
POOL SERVICE AREA
BOYS SERVICE UNIT
GIRLS SERVICE UNIT
STORAGE
INDOOR PHYSICAL EDUCATION
BOWLING INSTRUCTION
FIELDS AND COURTS
WRESTLING INSTRUCTION
STORAGE
PARKING AREA
STUDENT CENTER

PHYSICAL AND HEALTH EDUCATION CENTER

Extensive research findings and results of armed service rejection of American youth during the forties and early fifties pointed to a critical need for greater emphasis on physical fitness. In order to emphasize the need for better programs in health education, physical education and recreation, the President of the United States in 1956 established the Presidents' Council on Youth Fitness of American Youth.

By 1960 a concerted effort was being made in Arkansas to formulate and carry out a program of improvement in the state. The Governors Conference on Youth Fitness, the Arkansas State Board of Health, the State Department of Education, and the Arkansas Association for Health and Physical Education had worked together sponsoring workshops and clinics to promote the new program.

Unfortunately, as is the case with many other innovative ideas, the results of these efforts have had little or no effect on educational programs in the isolated rural areas of the state. A vast majority of the small schools employ one teacher who is designated as coach to work with four basketball teams. Since community rivalry places heavy emphasis on winning in inter-school contest, the coach devotes much of his time to students who are potential athletes and little time to developing a physical education program for all students. Schools of Fulton County, Arkansas, are prime examples of this system. The Salem Model School must set the precedent for change. With the future outlook promising more leisure time and shorter work hours, it is imperative that young people receive training and skills that will insure a wholesome life of physical activities.

Members of the Conference on School Plant accessibility sponsored recently by Educational Facilities Laboratories have made a shocking prediction regarding new trends brought about by technological innovations:

> The impact of the rapid pace of technology on the future of students now in school simply staggers the imagination. The implications for education are only just beginning to emerge. Before 1970, computerized technology may force the nation to begin the sociological change from a world of work to a world of leisure. Surprisingly the very suggestion of a society "without work" schocks the educational profession. Our present society has been so schooled in the "work ethic" that the proposal to change to a society of "no work" is swiftly and positively repelled. Inherent in the reaction against a life of leisure and a "no work" ethic is the still fairly viable puritan belief upon which the country was built; idleness is a sin and morality is synonymous with hard work. At the risk of frequent and vigorous repudiation by groups representing conventional organizations, I venture to predict that the coming task of education will be to develop a "no work" ethic in which not having work will be considered good rather than bad.
>
> In the 1960's the unemployed no longer starve. By the 1970's a sophisticated society may have become so adjusted to the idea of leisure as a virtue that we shall be well on the road to translating the uncompromising puritan "work ethic" into the new notion that self-fulfillment is the greatest good.
>
> Now what kind of education will be needed by individuals living in a society of relatively little work? Students must have a far more rigorous basic education than they now receive. Since the economy of the future will provide substantial blocks of uncommitted leisure time for all

> persons, then Americans must begin the search for another fulfillment. This can be found only in education. In essence, if an individual is to experience self-fulfillment to any considerable degree, then he must be equipped with highly developed skills for learning.
>
> We have long known that the good life is an intellectual life. The new society created by technological advances must provide exciting intellectual expression for its members, all of whom will have substantial amounts of free time. This will give dimensions to our society that other societies have not had.
>
> In this highly technological setting it is also incumbent upon the schools to do much more for the vast army of the uneducated. The massive encroachment of automation has so severely disturbed the economy that a radically different educational program is necessary to restore balance.
>
> Now let's pause and examine the kind of age for which we will be educating----the age which may well be called the era of self-fulfillment. First, stretch your imagination until you can conceive of a lifetime of very little or no work. The most abundant asset will be time and there will be oceans of it. Some will call it free time, some idle time, others leisure time, depending upon their personal outlook toward life. In any case, vast amounts of uncommitted time are a commodity which our society is not presently prepared to consume in generous quantities.
>
> It must be emphasized that this leisured society is very near.[1]

No area of public school curriculum has greater responsibility in educating the American populace to face the future which offers eons of leisure time. The physical education program must broaden its objectives to meet the needs of all citizens. Competitive sports must be only one important phase of this program. With the broad objective of improved health and physical well-being of all citizens, sufficient space and facilities for a good physical education program must be provided. The facility must be designed to provide a well-rounded program of physical activity for all children with each child participating in physical health activity each day in the week.

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[1] Information in a report of the Conference on School Plant Acessibility for Educational Facilities Laboratories, Inc., 1965, p. 7.

The Salem Model School shall endeavor to meet the challenge by providing:

1. Skilled leadership and adequate facilities which will afford an opportunity for the individual or group to act in situations which are physically wholesome, mentally stimulating and satisfying, and socially sound.
2. Games, individual and group activities, intramural sports, athletics and aquatics that will seek development of vital organs, insure functional skills for leisure time, stimulate interest in play, promote physical fitness and set high standards of behavior.
3. Self-testing activities, stunts on apparatus and personal combat activities that develop the individual skills.
4. Dances that aim at vigorous activity, certain skills and controls in poise and movement appreciation of music, line, rhythm and design.
5. Adapted physical education that will reflect preventive measures and correction of remediable defects.
6. Opportunity to participate in activities such as hiking, golf, boating, camping, skiing, hunting and fishing that lead to skill in these activities and a real love for the out-of-doors.

The discernible trends indicate a change must be brought about in at least three areas of education as it effects the physical fitness program in this model situation.

First, there should be a trend toward large group instruction in the various phases or techniques of any particular activity, by two or more capable instructors using the team teaching approach. For maximum results more than one teaching station will be required. This appears to be the best approach to the problem of large numbers when all students are required to participate daily.

Secondly, there will be an expansion of content within the fitness program and a trend toward adult education in physical fitness and public use of facilities and apparatus. The Salem area offers an ideal setting for exploration of programs in adult education since there are no public recreational parks or playgrounds other than those built along the lakes of North Arkansas. The closest of these is a public boat dock twenty-seven miles removed.

Presently there are none of the following facilities open to public or school use in this area:

Theatre
Football Field
Swimming Pool
Bowling Lanes
Skating Rink
Auditorium
Tennis Courts
Golf Course
Track

A third major step will be made by increasing intramural activity within the school and programming of adult activities during evenings and summers. Outdoor activities are naturals for this area and only require organization and leadership to be highly successful.

Enrollment and Class Size

The enrollment of the Salem Model School is expected to be 635, and each student will be required to participate each day. Based upon a six period day this will require space adequate to accommodate 106 students per hour and will require a staff of three qualified physical education instructors.

Activities

The activities in which the students and adults of this area will participate can be divided into five areas:

1. Group and individual games

    Basketball
    Volleyball
    Softball
    Soccer
    Touch Football
    Badminton
    Tennis
    Table Tennis
    Bowling
    Water Basketball
    Handball
    Shuffleboard
    Golf
    Track and Field
    Archery

2. Self-assertion activities

    Tumbling and stunts
    Gymnastics
    Boxing
    Wrestling
    Weight Training
    Isometrics
    Swimming
    Water Safety
    Diving
    Skiing (Summer Program)

3. Nature exploration

    Hiking
    Camping
    Hunting
    Boating
    Fishing

4. Dance

    Social
    Modern
    Folk
    Square

5. Health and safety education
    Home safety, water safety, and life saving
    Care of the human body
    Proper diet, exercise, work and rest
    Danger of drugs, alcohol, and tobacco
    Preventative functions for health and safety

Summary of Physical Education Center

The physical education program is an integral part of the educational process in our democratic society. It provides an opportunity for the continuous development of each individual's physical, mental, social, and emotional capabilities through a systematic and selective instructional program.

The unique contributions of physical education to the individual's total educational process is that of developing an appreciation of and maintaining one's own physical fitness, as well as creating an interest in and enjoyment of physical activity for recreational purposes. To this end, the Salem Model Physical Education Center has been developed providing both indoor and outdoor facilities to accommodate variable-sized activity groupings.

This Physical Education Center is the one part of the school plant which will be most often used by the greatest number of students and adults. Furthermore, it is reasonable to assume that, in the future, community use of school buildings will place even greater demands on this area as an athletic and recreational facility. Therefore, extensive design consideration must be given to the development of attractive, practical, and flexible space to house the physical education activities.

Suggested Physical Space Requirements

The main field house will be the center of the physical education activities. It will also have considerable use for recreational activities, student social functions and student assemblies. It should have one regulation basketball court with two cross courts and space should be provided around the regulation court to permit roller skating without allowing access to the central portion of the field house. This area of the facility can also be used for mat work, tumbling, calisthenics, wrestling, boxing and other activities requiring inside accommodations. Provisions must be made for easy access to locker-dressing rooms for both boys and girls.

The ceiling height should be held to a minimum in all areas except over the playing court where it should be about 22 feet. Hard maple flooring is preferable for this facility.

About 13,500 square feet will be required to meet the needs of this multiple-use area.

An area of 300 square feet of storage space should be immediately accessible to the main floor. Provision should be made for storage of net posts, folding chairs, recreation equipment and supplies. Depending upon the location of the locker and dressing area, storage and issue of approximately 200 pairs of shoe skates should be located in the most convenient locale. It may be found that provision must be made in this main gym storage area. Double doors are desirable.

At least one additional auxiliary physical education storage area should be located at one side of the facility with direct access from the main floor. It should be rectangular in shape to facilitate storage of larger gym apparatuses and tumbling mats. No less than 150 square feet should be provided and unobstructed double door-ways will make the task of storing equipment much easier to manage.

A regulation indoor pool with six lanes should be provided. The dimension should be 75 feet by 42 feet with a depth range from four feet to twelve feet. Provision should be made for a one-meter and a three-meter board. A total of 5,000 square feet will afford adequate auxiliary and deck space. Provision for an indoor-outdoor pool arrangement will be more acceptable providing the cost is not prohibitive.

The pool equipment space for filters, water heaters and controls will occupy approximately 1,000 square feet. One auxiliary equipment storage space with about 150 square feet should be located with close proximity to the pool. A general control office should be located near the entrance to the pool and locker areas. It should be possible for either the pool or the field house to operate independently; that is, areas not in use should be closed off to prevent pilferage and to enhance proper supervision.

Approximately 3000 square feet should be dedicated to the construction of three or four bowling lanes. The accent in this part of the facility as well as other parts should be on space needed for educational activity. The lanes should be a part of the main field house or immediately adjoining it, and should offer easy access to locker and shower areas. A manual pin-set mechanism is preferable.

Two service units, one for boys and one for girls, with a total of 5,700 square feet will adequately meet the needs in this facility. Planning should afford accessibility from the indoor swimming pool area, the main field house, and the auxiliary physical educational stations via interior circulation. There should be exterior access from outdoor court and field areas.

Boys Unit: About 800 square feet will be necessary for installation of 320 individual lockers, 60 dressing lockers, and fixed benches to accommodate classes of 50 to 60. This locker and dressing room should be related directly to both indoor and outdoor physical education facilities and to the shower, toweling, training, team, issue, and storage areas. Separate dry and wet foot traffic if at all possible.

The boys shower area will require about 300 square feet to house 30 shower heads. Careful attention should be given to drainage and water control. There should be direct access to the locker and team rooms through the toweling area only. A urinal and a foot-bath should be located conveniently by.

The toweling area with adequate shelving should be located enroute from the shower to lockers and team room. About 100 square feet should be adequate for this facility.

A seasonal equipment issue and storage room with approximately 200 square feet and appropriate shelving and racks should have access from the locker and dressing area. This room should relate to interior circulation and to the outdoor field and court area.

A non-seasonal equipment storage room should also have access from the locker and dressing area and should relate to the seasonal storage area. A larger space of 600 square feet will be necessary. Proper storage bins, shelving and racks should be planned to meet specific needs.

Two team rooms with 300 square feet each, and provision for 50 dressing lockers each should be located with direct access to the shower and toweling areas. Equipment issue and training rooms should be immediately accessible. These rooms should be mechanically equipped to facilitate uniform drying.

The training room will require about 200 square feet and should be planned with immediate accessibility from all play areas. This room should house first aid equipment, a whirlpool, heat lamps and a training table.

The departmental office and locker room with 450 square feet should include a shower, toilet, and dressing area for a minimum of three instructors. The office should provide for visual control and supervision of the service unit. The location of this unit is of great importance if proper supervision and control of student traffic is made possible.

A laundry with approximately 300 square feet should be adequate for both boys and girls equipment and supplies. It should be located with access to both equipment and toweling areas. Only commercial type equipment should be considered.

The boys toilet should relate to interior traffic from the service unit and to the public and community use of the swimming pool. About 200 square feet should be adequate.

Girls Unit: 800 square feet of space should be equipped with 320 individual lockers and dressing lockers to accommodate 50 girls. It should be related directly to both indoor and outdoor physical educational facilities. Toweling and issue rooms should be immediately accessible. Separate wet and dry foot traffic and six hair dryers conveniently situated within the dressing areas should be provided.

Gang showers are not considered advisable for girls; therefore, consideration should be given to plans for 30 private shower stalls with modesty screens for drying and dressing. Locate enclosed water closets conveniently to the shower area.

The toweling area with 100 square feet of shelving and storage space should be located enroute from the shower area to the dressing and locker area. Planning should include adequate shelving as well as a service window to facilitate ease and efficiency during issue periods.

Provision should be made to separate the storage of seasonal and non-seasonal equipment by either making two rooms related to each other or by using shelving to divide one room. It is felt that more usable space will be made available by providing 300 square feet of storage space in one unit if it is convenient to do so.

The departmental office and locker room must include office space for three instructors along with adequate shower, toilet and dressing areas. The location of this unit should provide visual control and supervision of the total service unit. The office should also be located near the main entrance to facilitate proper supervision of the student traffic between outdoor play areas and the service unit. This part of the facility can adequately be housed by allowing 250 square feet of floor space.

Toilets for the girls unit will require about 200 square feet of space. These should be strategically located with direct relation to the interior traffic from the field house and the auxiliary courts and fields. This unit must serve the public during community use of the pool.

Suggested Outdoor Areas

Hard-Surfaced Multi-purpose Areas: Two separate multi-purpose areas should be provided for outdoor activities such as basketball, volleyball, and calisthenics. Each area should contain two outside basketball courts with volleyball courts and shuffleboard courts superimposed over the basketball courts.

Football Field: The recommended dimensions are 190 feet by 420 feet. Since most of the play is lengthwise of the field, it is desirable to have the long axis extend northwest and southeast, forming an angle of 45 degrees from the north, to avoid glare from the sun. The field should be crowned in the center allowing approximately one inch fall to ten feet. Provision should be made to water the playing field and any other outside courts which require a sod to play on. Spectator bleachers are to be provided on the west side of the field only. Extra care should be taken to construct bleachers at an angle sharp enough to provide clear sight lines for every seat. Provisions should include bleacher seating for 1,500 occupants and space should be left available on the east side of the field to add 1,500 seats to meet future needs. Provisions should be made for installing the electronic controls necessary for timing and scoring. These can be housed in a small press box overlooking the playing field. The roof of the press box should be constructed flat and sturdy to permit foot traffic and use of filming equipment.

Running Track: A one-fourth mile running track is recommended. The track is to be located around the football field. The width of the straight-away should be 28 feet and should provide for eight lanes of 42 inches each. The inside curve of the track should be 110 feet with a true semi-circle for the curve. The straight-away should be the west side and should be extended to a minimum straightaway distance of 700 feet. The space required for laying out the oval of a one-fourth mile track is approximately 260 feet by 590 feet, with additional space required for the extended straightaway. An all-weather rubberized track or a Red Dog track is recommended.

Separate pits with runways should be provided for high jump and pole vaulting. One set of these pits should be located inside the running track in the semi-circular area near one end of the field or between a side of the football field and the track. A second set of pits should be located in the field area close by. The following dimensions are standard.

EVENT	WIDTH	LENGTH	LENGTH OF RUNWAY
Broad jump pit	10'	22'	125'
Pole vault pit	16'	12'	125'
High jump	16'	12'	50'

The discus event is usually held on the playing area of the football field; however, an area of approximately 100 feet by 100 feet should be designated for the shot-put event. This area is usually located in the semi-circular area near one end of the field.

Field Game Area: An area with dimensions of approximately 200 feet by 400 feet should be provided to allow maximum participation in such large space games as field ball, field hockey, touch football, soccer, speedball and calisthenics. This area should be crowned and properly drained to facilitate use soon after rainfall or watering of the area. Fields, backstops, and goals for the various games should be laid out in such a way as to permit overlapping use of the area during different seasons.

Baseball Field: An area with dimensions of 350 feet by 350 feet is recommended for layout of a regulation baseball field. This allows a minimum distance of 60 feet from home plate to the bleachers or backstop. Home plate must be located in the southwest portion of the field if it is possible to do so. The northwest corner may be considered as an alternate choice; however, under no circumstance should the backstop be placed directly facing the sun in the afternoon. The school site is sufficiently large to prevent overlapping of any of the major play fields, however the relationship of these areas to the field house and the service units should be considered in the planning. Proper planning should provide safety from batted balls and other more dangerous activities.

Apparatus Area: A space approximately 25 feet by 200 feet should be set apart for such equipment as chinning bars, vaulting bars, parallel bars, horizontal ladders, climbing ropes, and other obstacle course equipment designed for body building. This space should be located near one end of the playground and in such a way as to eliminate cross traffic through the area.

Tennis: Approximately 12,000 square feet should be set aside to accommodate two tennis courts and two backboards for practice stations. The actual size of the tennis court is 36 feet by 78 feet; however, clearance must be allowed beyond the boundaries to permit freedom of movement.

Golf: The Salem Model School will be located on a 150 acre tract of well-drained, moderately level land near the Salem city limits. This beautiful location will provide adequate space to develop a nine hole course around the perimeter and away from the buildings. Possible future expansion should be considered to prevent disruption of established facilities. This course, properly kept, will add aesthetic beauty to the total school property. Hazards and traps should not detract from this objective. Accessibility from the physical education complex and to the general public should be considered.

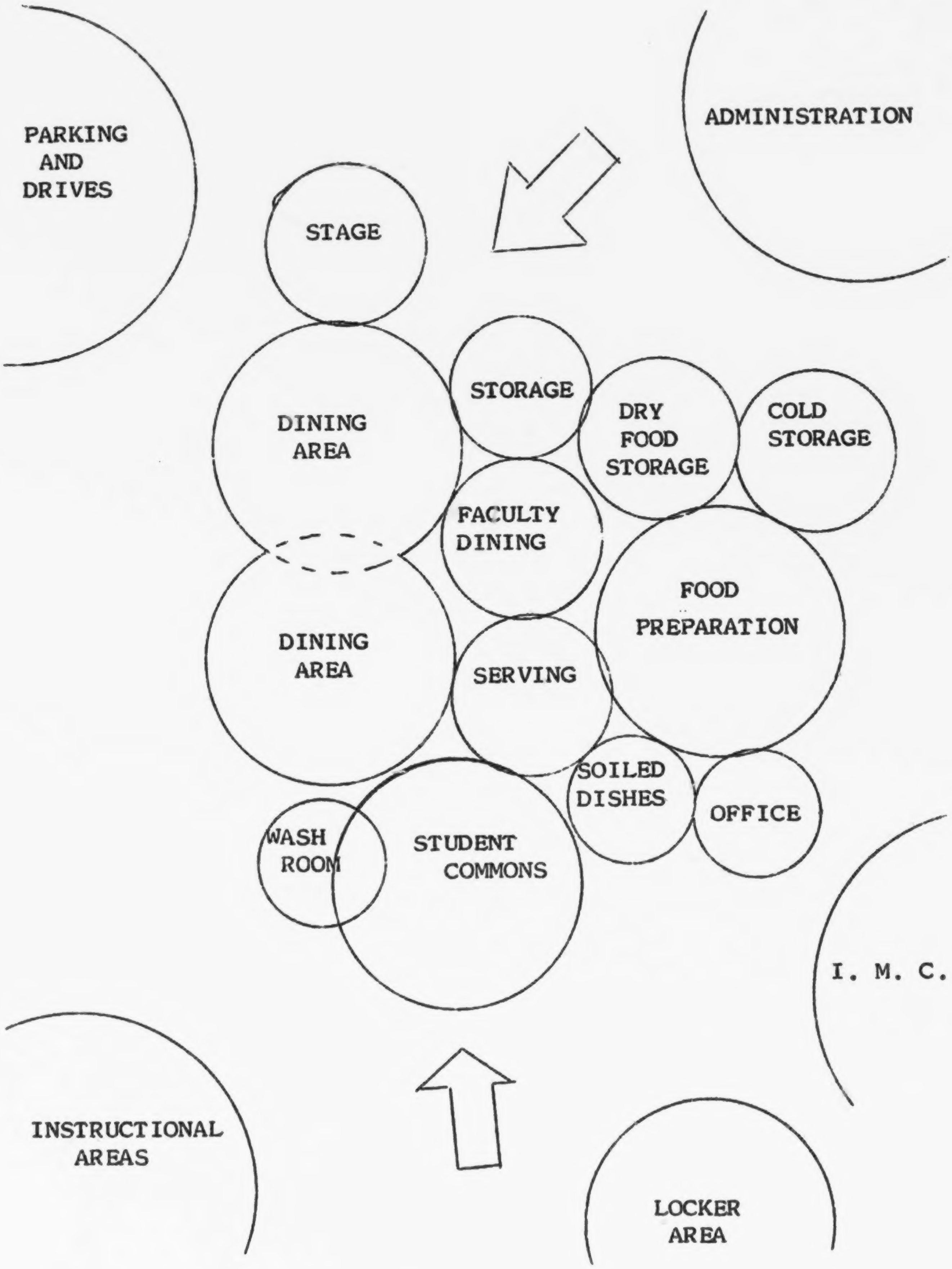
Summary of Physical Space Requirements

FACILITIES	AREA NECESSARY (Sq. Ft.)
Indoor Physical Education Unit	23,300
Main field house	13,500
Main storage area	300
Auxiliary P.E. storage	150
Ticket booths	50
Indoor pool	5,000
Pool equipment space	1,150
General control office	150
Bowling lanes	3,000
Boys' Service Unit	3,750
Locker and dressing room	800
Shower area	300
Toweling area	100
Seasonal equipment storage	200
Non-seasonal equipment storage	600
Team rooms (two)	600
Training and first aid room	200
Departmental office and locker room	450
Laundry	300
Toilets	200
Girls' Service Unit	2,150
Locker and dressing room	800
Shower area	500
Toweling area	100
Equipment storage room	300
Departmental office and locker room	250
Toilets	200
TOTAL	29,200

Outdoor Facilities

- Hard-surfaced multi-purpose areas
- Football field, bleachers and press box
- Running track, jumping pits, and weight throwing area
- Auxiliary field game area
- Baseball field
- Obstacle apparatus area
- Tennis courts
- Golf course

FOOD SERVICES CENTER AND COMMONS


PARKING AND DRIVES
ADMINISTRATION
STAGE
DINING AREA
STORAGE
DRY FOOD STORAGE
COLD STORAGE
FACULTY DINING
FOOD PREPARATION
DINING AREA
SERVING
SOILED DISHES
OFFICE
WASH ROOM
STUDENT COMMONS
I. M. C.
INSTRUCTIONAL AREAS
LOCKER AREA

FOOD SERVICE CENTER

In this culturally deprived area of the state, the food service center will have a two-fold obligation to the total program. Research has been carried out which indicates that proper nutrition enhances acceptable performance. Considering the educational needs of certain children in this area, one may utilize the food service center at this model institution as a training center for those interested in the food service industry.

The Vocational Home Economics Department in its newly expanded program is expected to use the lunch room facilities as a laboratory for vocational training in food service.

As an integral part of the total school program this facility will provide learning opportunities in nutrition education, table manners and eating habits, acceptable social behavior and suitable conversation, respect for others, self-reliance and cleanliness.

A wide variety of other curricula will find practical laboratories, in this facility--e.g., problems of food selection and cost, collecting, counting and banking money, table and flower arrangements, and sanitation problems.

This is the only facility in the area with kitchen and seating capacity to provide for social gatherings for the many and varied civic functions needed to promote progress in a backward community.

Tendencies Toward Change

Rapid advances in food technology and the food industry makes it imperative that equipment and storage facilities be provided to store and use the most practical and inexpensive foods.

Within the near future, schools will lean heavily on the use of both frozen and dehydrated foods.

SPACE UTILIZATION

Enrollment and Dining Area

Since the first enrollment is expected to be approximately 635, the dining area should accommodate the student body at one sitting. As the enrollment grows, the extra load can be provided for by serving in shifts. The dining area should be arranged so that it can be divided into two areas with an operative wall. The area adjacent to the serving facilities can be utilized for feeding while the second portion is being utilized in teaching or other activities. This second portion of the dining area should be equipped with a stage, curtain, and back drops for plays, programs, and practice activities.

Dining areas should be furnished with a single unit, folding table and chair combinations on casters for quick and easy storage (Sico equipment or equivalent should be considered).

Stacking chairs should be available in near by storage for use during activities when mass seating is required. Trapezoidal tables should be available for banquets, and large and small group instruction.

Faculty Dining

A separate area which will afford privacy for faculty members to dine is preferred. This area should be furnished with comfortable furniture that can be set up in varied arrangements for conferences and small group instruction.

Serving

Accommodation of the total enrollment will require two serving lines properly located to facilitate ease in the flow of traffic to the dining areas.

Kitchen

Careful planning must provide space for equipment that will be needed as the load increases. Since this area does not lend itself to flexibility and expansion without undue expense, dry and refrigerated storage should be adequate for expansion of the food service program.

This unit will be used to prepare food for the Elementary and Junior High schools located nearby. The food will be transferred to the outlying schools. Food preparation and storage must be adequate to accommodate the additional load of 600 students.

Commons

The Salem Model School will operate without study halls.

A common area should be located here to accommodate bus students that arrive early, and to serve as a lobby for traffic lines entering the serving and dining area of the cafetorium.

Other Facilities

A scullary equipped with automatic dish washing and sterilizing equipment should be located away from the dining area but with easy accessibility. The noise factor should be considered in the placement of this unit. It should be located advantageously permitting it to operate while programs or activities are in progress in the dining areas.

A dressing room and rest room should be located near the preparation area. This unit will be used by food service personnel only.

Other rest rooms should be located near the entrance to serving lines. Adequate hand washing equipment should be provided here for students and visitors entering the cafetorium.

Since cleaning will be a major chore in this facility, janitorial storage should be provided in the immediate area. Consideration should be given to the types of cleaning activities necessary, and proper provisions should be made available for storage and servicing of equipment. This should include a washer and dryer as well as sinks and hot and cold running water.

SPECIAL CONSIDERATIONS

Acoustics

Since the main dining area will be used for many varied activities it is imperative that careful consideration be given to acoustical treatment of walls and ceiling. This will also be necessary in the student commons area.

Floors

Each area should be treated according to the activity predominating. Probably the best choice will be a combination of quarry tile, vinyl tile, and ceramic tile. Wainscoating is advisable in many areas and washable paints should be used throughout.

A finished soft wood should be used on the stage to permit the securing of stage props.

Adequate floor drains should be located in appropriate places.

Water Coolers and Refrigeration

Electric water coolers should be located in the commons and at the serving area.

The refrigeration unit should be the walk-in, walk-through type with the cold storage compartment at the rear. This permits the deep-freeze section to open into the cooler area and not to the outside.

Kitchen Equipment

Original plans must provide space and mechanical outlets for all modern kitchen equipment. Stainless steel should be used throughout.

Communications

The entire facility should be tied in with the central inter-communication system.

Programs must be able to originate or be received in the cafetorium.

Ventilation and Air Conditioning

The kitchen area should be well ventilated to remove food odors.

Air conditioning should be afforded in the dining, office, and commons area. Hold window area to a minimum in the cafetorium.

All areas must be screened and fly-chaser fans should be used at entrances to areas where food is prepared and served.

Sanitation

A screened refuse disposal area should be located near by.

The incinerator should be located near the kitchen facility and should be adequate in size to meet the needs of the entire school plant.

A mechanical garbage disposal unit should provide for disposition of food waste.

Suggested Physical Space Requirements

FACILITIES	AREA NECESSARY (Sq. Ft.)
Dining Area and Stage	6,000
Food Preparation and Serving	1,000
Food Storage and Refrigeration	800
Dish Washing	300
Non-Food Storage	300
Office	75
Rest Rooms	400
Commons	1,000
TOTAL	9,875

SITE CONSIDERATIONS

It is essential that site considerations be integrated in the development of high school facility planning. Such planning should include consideration of vehicular and pedestrian traffic patterns, noise factors and prevailing winds indigenous to the area, the relationship between parking and circulation within educational spaces, and the location of outdoor teaching stations.

Traffic Patterns, Vehicular Access, and Parking

Traffic to and from the school will consist of regular day-to-day commuting and of movement of people and objects for special occasions. The regular traffic will consist of pupils, teachers, and other personnel to and from the site, the delivery of supplies and equipment, and the removal of waste.

Pupils will arrive and depart in automobiles driven by parents or others, in their own automobiles, on bicycles, by foot, and in district buses. Traffic patterns of each of these forms of transportation should be kept separate, wherever possible. Passengers and pedestrians ordinarily should not cross wheeled-transportation traffic lanes. There should be supplied: auto unloading and loading area; bicycle storage in an inconspicuous place; student, staff, and visitor parking areas; approach sidewalks at edges of the site; and bus unloading and loading area.

Present trends of high school youths as owners and operators of automobiles suggest that between 25 and 30 per cent of a four year student body may eventually drive to school and require parking accommodations. This implies approximately 300 student parking spaces. It is not necessary to provide paved areas for the total 300 spaces initially, but space should be allocated for future parking accommodations. It is recommended that a minimum of 190 parking spaces be provided at the time of facility construction and that the student parking area should be located to permit its use for adult parking for major school events and adult evening classes.

Two bus-loading stations should be provided adjacent to or near the student activity area. It is not desirable to load or unload students adjacent to the administration area, due to the noise and confusion that might arise.

Regular traffic will also include arrival and departure of employed personnel and of parents and other visitors. Most of these people will use automobiles, and separate parking areas should be provided for each.

The staff parking area should be located close to the administrative complex and parking spaces should be provided for 100 per cent of the number of certificated and classified employees-a total of 60 for a school with an enrollment of 635 students.

The visitor parking area is very important at this model school and should include provision for approximately twenty vehicles with easy accessibility to the front of the school.

During the school day, there will also be truck traffic to and from the site. This will include the delivery of instructional, maintenance, food and other auxiliary supplies, and removal of waste. Traffic lanes for service access should be separate from the administration, custodial storage rooms, industrial arts shops, food service areas, and physical education.

Suggested Physical Space Requirements

The following space allocations are recommended for a student body enrollment of 635. Recommendations for the initial staging and for future building expansion will be submitted after the schematic drawings have been presented by the architects.

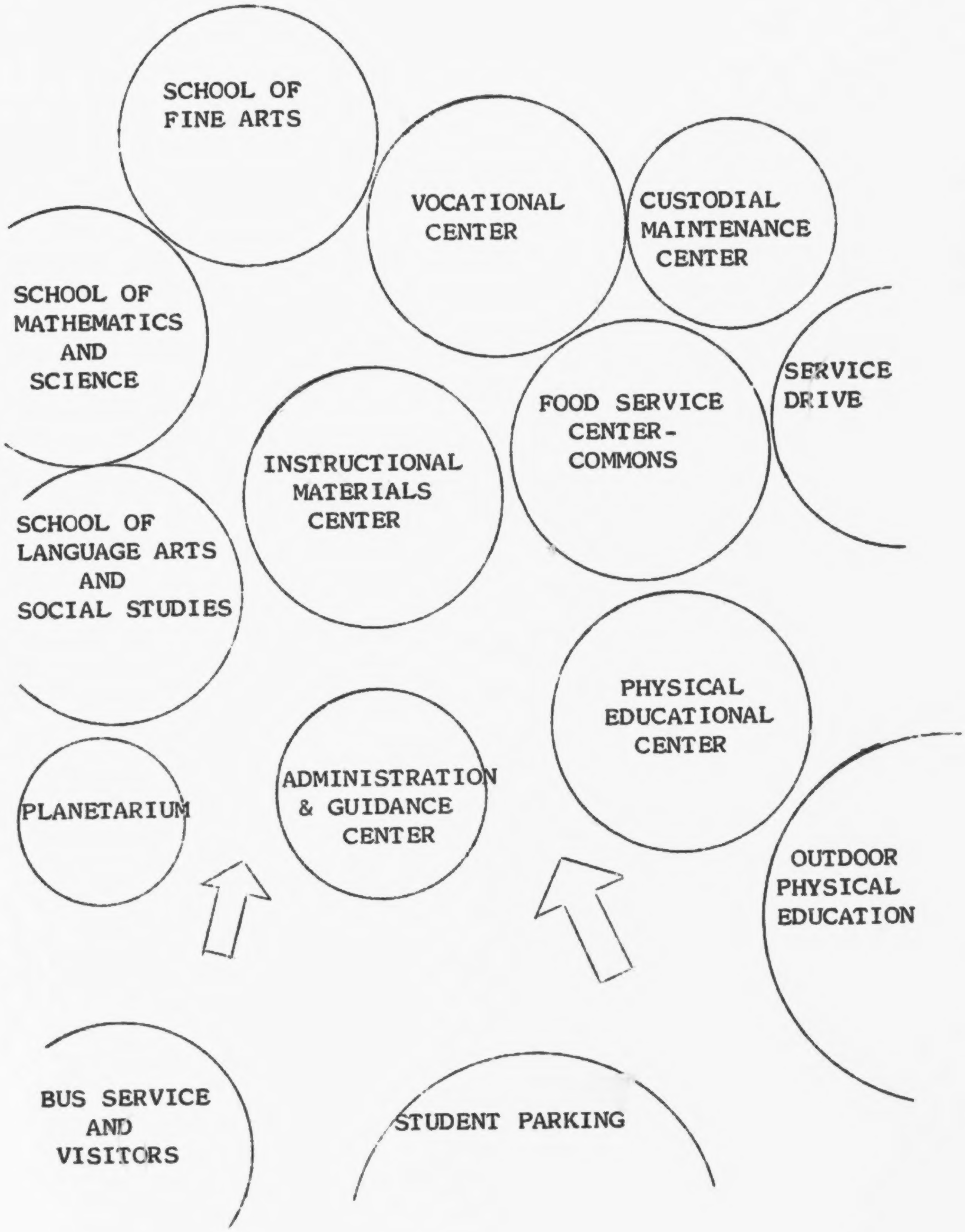
These approximate space allocations are intended to be suggestive rather than final or complete and are to serve the staff and architect as a point of departure rather than an unchangeable dictum.

The Salem School Board has purchased the future site for this facility. It is a 152 acre tract of land located about one-fourth mile east of Salem on Highway No. 62. Approximately 25 acres lie north of the highway, with 127 acres in one block on the south. The land is generally rolling and clear of heavy timber. A topography is attached to these specifications.

FACILITIES	AREA NECESSARY (Sq. Ft.)
Administration, Guidance and Health	4,120
Instructional Materials Center	8,600
Language Arts and Social Studies	12,850
Science and Math	11,900
Art, Music and Home Economics	10,895
Little Theatre	11,750
Vocations	16,900
Physical Education	29,200
Food Service Center	9,875
Custodial Service Center	1,450
TOTAL NET AREA (75% of Gross)	117,540
MECHANICAL, CIRCULATION & STRUCTURAL (25% of Gross)	39,180
TOTAL GROSS AREA	156,720

Outside Areas
Auxiliary Areas for Physical Education
Parking
Drives and Walks
Outdoor Classrooms
Science Garden
Golf Course

GENERAL CAMPUS RELATIONSHIPS


SCHOOL OF FINE ARTS
VOCATIONAL CENTER
CUSTODIAL MAINTENANCE CENTER
SCHOOL OF MATHEMATICS AND SCIENCE
SERVICE DRIVE
FOOD SERVICE CENTER-COMMONS
INSTRUCTIONAL MATERIALS CENTER
SCHOOL OF LANGUAGE ARTS AND SOCIAL STUDIES
PHYSICAL EDUCATIONAL CENTER
PLANETARIUM
ADMINISTRATION & GUIDANCE CENTER
OUTDOOR PHYSICAL EDUCATION
BUS SERVICE AND VISITORS
STUDENT PARKING

CUSTODIAL - MAINTENANCE CENTER

Recent psychological studies have indicated that a high level of maintenance of the school facility contributes to desirable morale of both teachers and students.

This facility has been planned to flex with the changes that are sure to come in both curriculum and teaching techniques; it should not soon become outdated. With promise of a long life of usefulness it becomes even more important that proper custodial care and maintenance be maintained.

Special attention must be given to the provision of spaces to house the personnel, supplies and equipment necessary to provide for the safety and comfort of those who use and visit the campus.

The custodial and maintenance area will include space for the custodial staff, a commercial washer and dryer suitable for laundry of such items as supplies for food service, linens for the health unit, water and oil mop heads used in floor maintenance and shop clothes used throughout the industrial arts department.

Suggested Physical Space Requirements

FACILITIES	AREA NECESSARY (Sq. Ft.)
Receiving and Storage	1,200
Office and Wash Room	200
Toilet	50
TOTAL	1,450

Approximately 600 square feet of the storage area should be arranged to provide protection for supplies that are subject to damage from handling and moisture. The remaining 600 square feet should offer convenience in storage and care of yard equipment, floor scrubbing and polishing equipment and racks for materials purchased in bulk.

The entrance to the equipment storage area should be sufficient in size to admit one truck with a stake body.

The location of this area should be determined after the remainder of the school facility is planned. It should be placed as near the center of the plant as possible and with direct accessibility to both buildings and grounds. It should relate to a service entrance and should have an elevated loading dock to facilitate loading and unloading of supplies and equipment. The building should be properly insulated to prevent freeze damage during winter months.

CHAPTER VI

IMPLEMENTING THE NEW PROGRAM

Two basic steps remain in the planning of this Title III project. The architects are using the educational specifications to develop a set of preliminary building plans. When these plans are completed, reviewed by the educational committees and school board, and revised as required to meet the approval of said committees they will become a part of the project to be submitted.

The project director will prepare an operation budget to

1. Cover the cost of construction of the planned facilities.
2. Provide for a transitional program including in-service training for the faculty.
3. Cover the expense of operating the school during the first year of operation.

The submission of the operational grant will consummate the planning process and will be presented to the United States Office of Education as a request for a supplementary service and facilities grant.

Reorganization of Attendance Areas

Upon approval of this exemplary program the new administrative personnel will proceed with legal steps required in

Arkansas to reorganize the participating schools into one high school district.

Bus routes will be established to transport students to the new facility. The expected enrollment will be ascertained for the first year of operation, and the exact number of school personnel will be determined.

School employees now working in the participating schools will be interviewed for positions open in the model school. All qualified personnel will be given priority in filling the new positions. It is anticipated that master teachers and certain supervisory personnel will have to be recruited, if possible, from systems where similar programs have been in operation.

Construction of the model school should be under way by April or May, 1967, and the educational wings of the school will require approximately 12 months for constuction. Installation of equipment, completion of walks and service areas, and landscaping can be completed in three additional months, making the facility ready to open for the fall term of school in 1968.

Transitional Implications

As soon as the operational grant is approved, it will be necessary to employ the principal, a curriculum director, a counselor, and the model school librarian to begin the arduous task of selecting and securing the many and varied records, library and teaching materials and supplies and of developing the plan to make the transition to the new program. This personnel will have approximately 12 months to complete their assignment.

Since this is a model program and is to include experimentation, it is imperative that a complete accumulative file be prepared for each student prior to his entry. It will be the responsibility of the counselor to obtain this information and become knowledgeable about each student. Students will be phased into the new program at the level determined appropriate by thorough knowledge of their achievement level.

The interim during construction will permit the principal to set up administrative machinery for the operation of the ungraded school. He will work with the curriculum director to organize and prepare areas of curriculum materials. The principal and his planning staff will work closely with the staff of teachers in selection of curriculum materials and in making the major decisions regarding teaching techniques and detailed planning for best team results.

This team of planners will also assist the librarian start the selection and requisition of basic books, supplies, and programmed materials for the new library.

The administration will place on contract all personnel to begin June 1, 1968. A 12 week in-service training program will be held during the summer prior to the opening of the new school.

The faculty will meet early in the program to make a final decision on the curriculum that will be offered during the first semester. Teachers will receive their assignments at this time and will begin their team-planning for the following year.

Curriculum specialists and consultants familiar with ungraded programs will be brought in to assist teachers in planning. It is anticipated that four weeks will be sufficient time to accomplish the desired goals of the planning session.

A six-week summer school will follow the planning session. During this time student enrollment will be held to a maximum of five students to one instructor. The faculty will use this time to experiment with the new techniques of multiple grouping, team teaching, and individualized instruction. Consultants will be available during this period to demonstrate under normal teaching conditions and to help evaluate the new program. Representatives from companies who have furnished the electronic and other teaching machines and devices will hold sessions during which they will demonstrate the function of the equipment and explain the operational nomenclature.

During the last week of the experimental school, an evaluation team will examine the program and judge the effectiveness of it. The results of the evaluation will be submitted in writing.

At the close of summer school, the faculty will use the eleventh week of the in-service workshop to review the report of the evaluative team and to make their own critical analysis of procedures and techniques. The remaining time will be spent in readjusting, and rewriting programs, procedures, and materials for the fall term.

The twelfth week of the workshop will be primarily for registration and guidance of individual students. Each student will be interviewed by a team of teachers who will have prior access to the students' accumulative file. Special care will be taken during this first year of operation to make sure students understand how the ungraded school will function and to help each student find his appropriate level of achievement in each subject.

The administrative machinery will be organized to place the adult education program in operation by July, 1968. The classes to be offered and the curriculum materials and techniques to be used will be determined by the faculty after surveying needs and interests of the community.

Evaluation and Dissemination

It is evident that many educators either do not believe in the advantages of a multi-phased curriculum or they are unwilling to try it because they are afraid of change. When the Salem Model School breaks free from the conventional lock-step graded system and adopts the appropriate placement plan, it must have planned evaluative procedures ready to keep Arkansas and the nation aware of its progress. Evaluative procedures will include both short and long range comparisons.

Achievement test batteries will be administered to all students three times each year--at the close of the spring semester in May, at the opening of the fall semester after summer school is completed, and at mid-term. A careful evaluation of progress made by each student will be compiled and made available for dissemination to interested persons.

There are ten high schools in Arkansas with enrollments comparable to this proposed model school in size. All of these schools are using the graded system and conventional techniques. Cooperation of these schools will be sought to permit the administering of identical achievement test to grades 9 through 12. The school with greatest similarity in achievement level, number of students, and community background will be chosen as a control school. Regular comparisons will be made to show the relative gains of students in both programs.

The chairman of the State Committee of the Commission on Secondary Schools will be requested to organize a special committee of handpicked educators to conduct a preliminary North Central study during the spring semester of the first year of operation. The purpose and timing of this study is two-fold. First, it will constitute the required move of the school toward acceptance into the North Central Association. But of equal importance is the use which can be made of the written evaluation that will be presented by the committee. This evaluative process will be completed in the fall of the second year when the North Central Committee makes its final evaluation and recommendation to the State Committee.

Results of educational evaluations are usually judgmatical and often ambiguous. However, when teachers study their teaching techniques and are personally confronted with problems yet unsolved, they are often able to evaluate their progress and mistakes with greater accuracy than the outsider.

The faculty of the Salem Model School will be engaged in a continuing program of self evaluation. Written reports will be required on a regular basis to make dissemination of results possible.

There are several very important long-range goals that have been set by this school that will serve as excellent guide posts in long-range evaluation. At this writing,

1. The dropout rate is high, 63 percent.
2. The average achievement level of students in this area is about one full grade below normal.
3. The average adult education grade level is 8.4.
4. Unemployment is extremely high in this area, 18 percent.
5. The percentage of students continuing their education after high school is excessively low.
6. Students taking advantage of any form of technical training are practically nil.
7. About 98 percent of all high school graduates leave the area.
8. The average age of the population in the area is increasing rapidly as young people continue to leave.

Evaluation of these areas which are directly related to the program of this model school will be made to determine what progress, if any, is being made toward solving some of these social and economic problems.

Should this program succeed and become a model acceptable by educators in other areas of the state, it may have a profound influence on voluntary reorganization of school districts in Arkansas. An evaluation of this influence should be made and the results made available to the public.

This program will have one distinct advantage in disseminating information. Since it is a federally financed pilot school, it will receive publicity through all organs of the United States Office of Education.

The office of project director will be retained to act as public relations director, to conduct guided tours of the facility, and to collect and disseminate all information pertaining to the program to interested parties.

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APPENDICES

APPENDIX A

Estimated Population of Fulton County

ESTIMATED POPULATION OF FULTON COUNTY

Fulton County Population - 1960 Census		6,657
Meter Installations, North Arkansas Electric Cooperative, January, 1961	2,121	
Meter Installations - January 1966	2,339	
Total New Installations	188	
Estimated Number of Persons Per Household	3	
Estimated Total Population Gain	564	
Fulton County Population, 1966 Estimated		7,221

APPENDIX B

Exhibit I: Proposed Budget Request for Planning Grant Title III, Public Law 89-10

Exhibit II: Proposed Budget for Rental of Materials and Equipment and Purchase of Supplies

EXHIBIT I: PROPOSED BUDGET REQUEST FOR PLANNING GRANT
TITLE III, PUBLIC LAW 89-10

Name of Applicant Salem School District 30

Address of Applicant Salem, Arkansas

Date Submitted November 5, 1965

For project planning grant beginning January 1, 1965

And ending July 31, 1966

Expenditure Accounts			Estimated Expenditures		
	Title (1)	Account No. 1 (2)	Total Amount (3)	Source of Funds ESEA III (4)	Other (5)
	PROGRAM PLANNING				
1.	Salaries	110	7,000 1,750	7,000 1,750	None
2.	Contracted Services for Administration	120	10,000	10,000	None
3.	Other Expenses (Includes materials and supplies in Exhibit II)	130	668	668	None
4.	TOTAL		$19,418	$19,418	

EXHIBIT II: PROPOSED BUDGET FOR RENTAL OF MATERIALS AND EQUIPMENT AND PURCHASE OF SUPPLIES

Quantity	Name of Item	Indicate	Description	Unit Cost	Total Cost
1	Typewriter	Rental		25.00	175.00
1	Recording Calculator	Rental		34.00	238.00
10R	Paper	Purchase			50.00
1	Carbon	Purchase			1.00
	Printing or Copying	Rental		100.00	100.00
	Misc.	Purchase		100.00	100.00
	TOTAL				$ 668.00

APPENDIX C

Exhibit I: Proposed Budget Request for Supplement to Planning Grant Title III, Public Law 89-10

Exhibit II: Proposed Budget for Rental of Materials and Equipment and Purchase of Supplies

EXHIBIT I: PROPOSED BUDGET REQUEST FOR SUPPLEMENT TO PLANNING GRANT TITLE III, PUBLIC LAW 89-10

Name of Applicant Salem School District No. 30

Address of Applicant Salem, Arkansas

Date Submitted March 25, 1966

For supplement to project planning grant beginning

August 1, 1966 and ending June 30, 1967

Expenditure Accounts		Estimated Expenditures		
Title (1)	Account No. 1 (2)	Total Amount (3)	Source of Funds ESEA III (4)	Other (5)
PROGRAM PLANNING				
1. Salaries				
a. Project Director	110	10,000	10,000	None
b. Clerk-Typist	110	2,500	2,500	None
2. Fixed Charges	800	750	750	None
3. Contracted Consultant Services and Expenses				
a. Travel Expense	120	5,000	5,000	None
b. Consultant fees	120	4,500	4,500	None
c. Phone	120	500	500	None
4. Other Expenses (See Exhibit II)	130	1,193	1,193	None
5. TOTAL		$24,443	$24,443	

EXHIBIT II: SUPPLEMENT TO PLANNING GRANT

Proposed Budget for Rental of Materials and Equipment and
Purchase of Supplies with Public Law 89-10 Title III Funds,
Fiscal Year August 1, 1966 to June 30, 1966

QUANTITY	NAME OF ITEM		DESCRIPTION	UNIT COST	TOTAL COST
50 rm.	Paper	P	Gestetner Mimeo	2.00	100.00
30 qr.	Stencils	P	Gestetner	3.00	90.00
1 cs.	Paste Ink	P	Gestetner	30.00	30.00
200	File Folders	P	Manila	2.50	5.00
1 bx.	Carbon	P	Paper	3.00	3.00
500	Stationery	P	Letterheads	15.00	15.00
200	Progress Reports	P	Quarterly Reports	.25	50.00
500	Brochures	P	Profile of a Model School	1.00	500.00
Est.	Postage	P	Self Explanatory		200.00
	Miscellaneous	P			200.00
TOTAL					$1,193.00

APPENDIX D

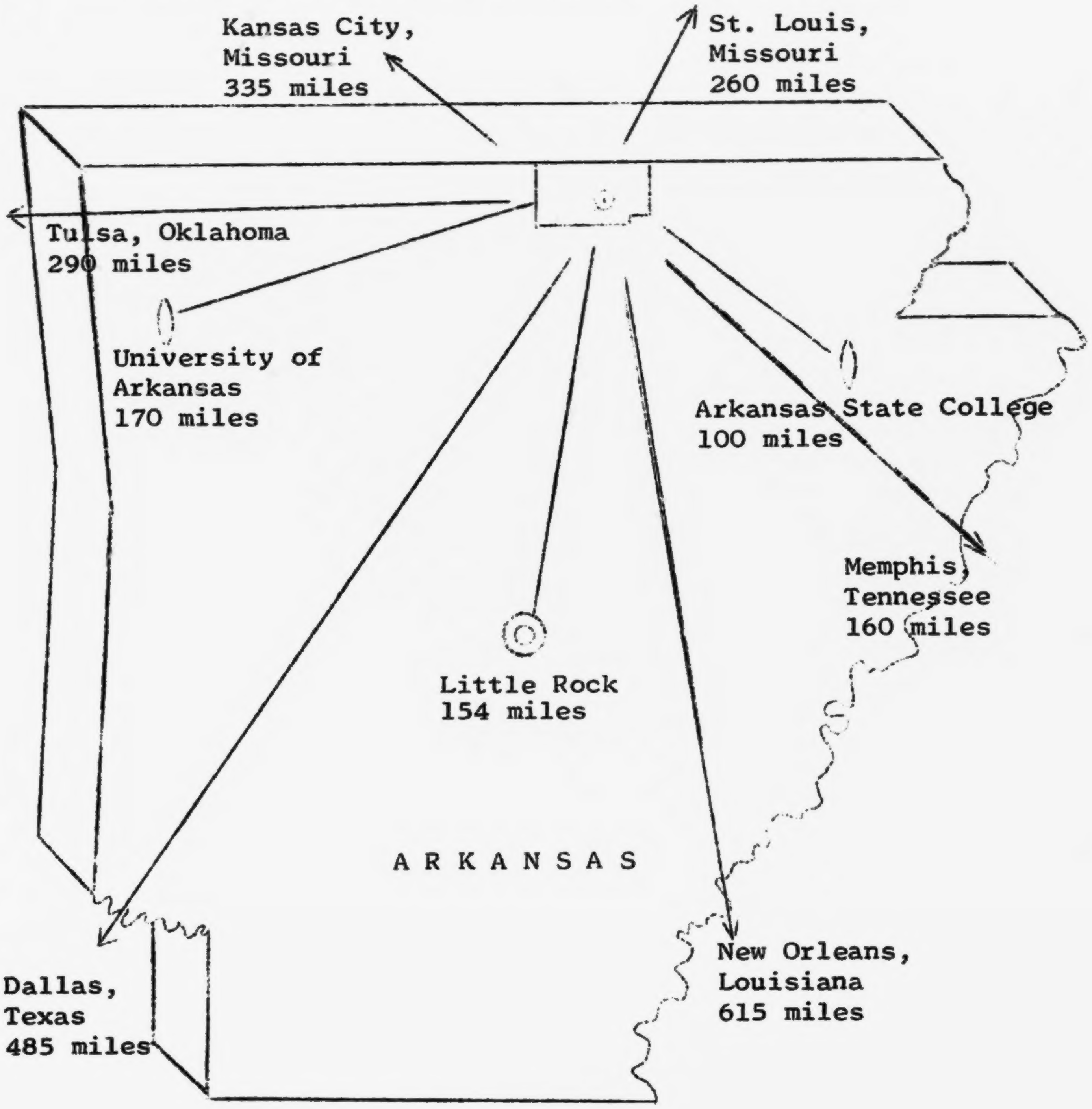
Map I: Distance from Salem, Arkansas, to Major Cities

Map II: Fulton County, Arkansas

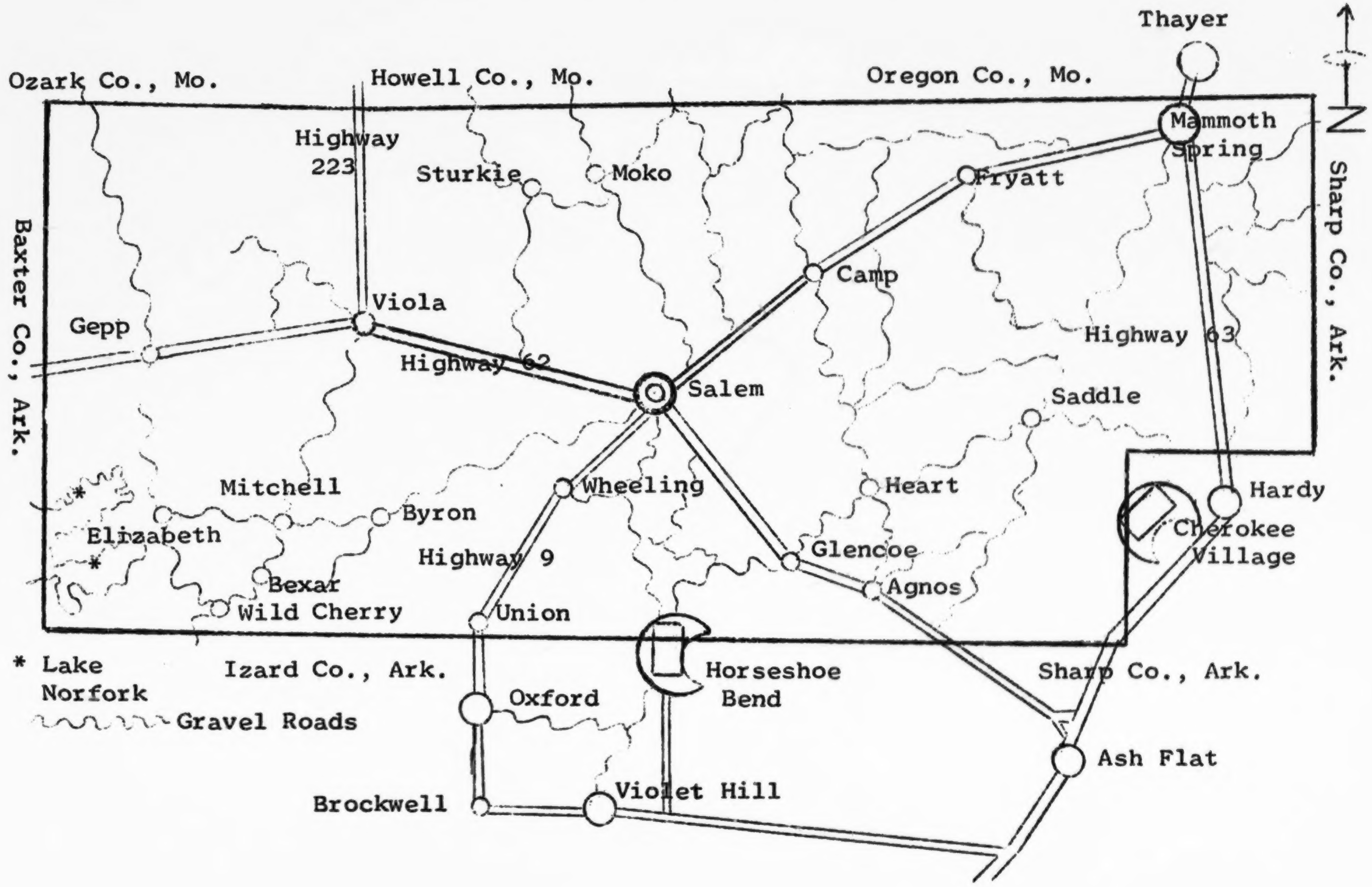
APPENDIX D

MAP I

DISTANCES FROM SALEM, ARKANSAS, TO MAJOR CITIES


Kansas City,
Missouri
335 miles
St. Louis,
Missouri
260 miles
Tulsa, Oklahoma
290 miles
University of
Arkansas
170 miles
Arkansas State College
100 miles
Memphis,
Tennessee
160 miles
Little Rock
154 miles
ARKANSAS
Dallas,
Texas
485 miles
New Orleans,
Louisiana
615 miles

MAP II: FULTON COUNTY, ARKANSAS


Thayer
N
Ozark Co., Mo.
Howell Co., Mo.
Oregon Co., Mo.
Mammoth Spring
Highway 223
Sturkie
Moko
Fryatt
Sharp Co., Ark.
Baxter Co., Ark.
Camp
Viola
Gepp
Highway 63
Highway 62
Salem
Saddle
Mitchell
Wheeling
Heart
Hardy
Byron
Elizabeth
Cherokee Village
Highway 9
Glencoe
Agnos
Bexar
Wild Cherry
Union
* Lake Norfork
Izard Co., Ark.
Horseshoe Bend
Sharp Co., Ark.
Oxford
Gravel Roads
Ash Flat
Brockwell
Violet Hill